UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF MASSACHUSETTS

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| THE UNITED STATES OF AMERICA,<br><br>Plaintiff,<br>v.<br><br>THE COMMONWEALTH OF MASSACHUSETTS, et al.<br><br>Defendants, and<br><br>THE COALITION FOR BUZZARDS BAY,<br><br>Intervenor-Defendant | Civil Action No. 05-10112 JLT |
| THE AMERICAN WATERWAYS OPERATORS, et al.<br><br>Intervenor-Plaintiff<br>v.<br><br>MITT ROMNEY, Governor of Massachusetts, et al.<br><br>Defendants | |

**AFFIDAVIT OF JONATHAN M. ETTINGER IN SUPPORT OF THE OPPOSITION OF THE COALITION FOR BUZZARDS BAY TO THE UNITED STATES' MOTION FOR SUMMARY JUDGMENT AND IN SUPPORT OF ITS CROSS-MOTION FOR SUMMARY JUDGMENT**

I, Jonathan M. Ettinger, depose and state as follows:

1. I am admitted to the bars of the Supreme Judicial Court of Massachusetts, the United States District Court for the District of Massachusetts, and other jurisdictions. I am a partner in the law firm of Foley Hoag LLP and am lead counsel for The Coalition for Buzzards Bay ("The Coalition").

2. Pursuant to Rule 56(f), I submit this affidavit based upon personal knowledge in support of the Opposition of The Coalition for Buzzards Bay to the United States' Motion for Summary Judgment and in Support of Its Cross Motion For Summary Judgment.

3. The United States' Motion for Summary Judgment seeks a judicial declaration that the United States Coast Guard (the "Coast Guard") has not violated the Administrative Procedure Act ("APA"), 5 U.S.C. § 706(1), by unreasonably delaying the promulgation of regulations under 46 U.S.C. § 2303a to require alcohol testing within two hours of a serious marine casualty.

**RELEVANT PROCEDURAL HISTORY**

4. On January 18, 2005, the United States filed a complaint for declaratory and injunctive relief, alleging that certain provisions of An Act Relative to Oil Spill Prevention and Response in Buzzards Bay and Other Harbors and Bays of the Commonwealth, 2004 Mass. Acts 251 (Aug. 4, 2004), as amended by 2004 Mass. Acts 457 § 1 (Dec. 30, 2004) (the "Oil Spill Prevention Act") are preempted by federal law.

5. On March 22, 2005, the Commonwealth of Massachusetts filed an answer to the United States' complaint.

6. On March 31, 2005, The Coalition filed an Unopposed Motion for Leave to Intervene.

7. On April 11, 2005, the Commonwealth of Massachusetts filed an amended answer to the United States' complaint which included a counterclaim alleging that the United States Coast Guard had violated the APA, 5 U.S.C. § 555(b), by unreasonably delaying the promulgation of regulations under 46 U.S.C. § 2303a to require alcohol testing within two hours of a serious marine casualty.

8. On April 4, 2005, the Court granted The Coalition's Motion for Leave to Intervene and deemed The Coalition's answer filed.

9. On May 11, 2005, The Coalition filed an amended answer to the United States' complaint which included a counterclaim alleging that the United States Coast Guard had violated the APA, 5 U.S.C. § 555(b), by unreasonably delaying the promulgation of regulations under 46 U.S.C. § 2303a to require alcohol testing within two hours of a serious marine casualty.

10. On May 23, 2005, the United States filed a Motion for Summary Judgment on the Commonwealth and The Coalition's counterclaims.

11. No scheduling conference pursuant to Fed. R. Civ. P. 26(f) has occurred in this matter, and no discovery has been conducted.

**DISCOVERY ISSUES**

12. In its summary judgment motion, the United States argues, among other things, that, immediately following its promulgation, the Coast Guard took an interim step to give effect to the requirements of 46 U.S.C. § 2303a, and since that time has been working diligently towards issuance of a final rule, which is expected to occur soon. The United States also argues that any delay has resulted from the complexity of the issue and the need for the Coast Guard to devote its resources to other projects. The United States further argues that the Coast Guard has been working diligently to promulgate a final regulation and might do so by the end of 2005. Through these arguments the United States seeks to establish that its seven year delay is not unreasonable.

13. In support of these arguments, the United States submitted the Declaration of W. Douglas Rabe ("Rabe Declaration"), Exhibit 1 to the United States' Motion.

14. The Coalition has not yet had an opportunity for discovery regarding the factual bases for the statements made in the Rabe Declaration.

15. The Rabe Declaration raises a number of questions, identified below, on which The Coalition would like to seek discovery through document requests, requests for admission and interrogatories. The Coalition may wish to follow up on written discovery with depositions.

16. I believe that the following discovery will produce information relevant and material to the pending motion for partial summary judgment:

a. First, to the extent it can be relied upon, the Rabe Declaration states that the Coast Guard issued a policy letter to all Coast Guard marine safety inspection offices and other commands, bringing to their attention the provisions of section 2303a and requesting that they ensure alcohol testing be conducted in accordance with section 2303a whenever possible. Rabe Decl. ¶¶ 4-5. The United States argues that, by taking the interim step of "asking all relevant Coast Guard personnel to ensure that alcohol testing is conducted within the § 2303a time limits," the Coast Guard has done "all that the statute . . . requires." (Memo. at 11). The United States thus appears to argue that the Coast Guard's non-enforceable "policy instruction" *ensures* that alcohol testing will occur within two hours after an SMI. This argument raises several questions on which discovery is necessary, including:

i. What efforts have the Coast Guard offices, commands, and districts made in response to the Guidance?;

ii. What has happened as a result of any of these efforts?; What effect have these efforts had on the timing of alcohol testing following a serious marine casualty since the policy letter?

iii. In what percentage of SMI's has alcohol testing been conducted within two hours?

b. The United States argues that the regulatory process at issue here involves complex questions. Rabe Decl. ¶ 8. This argument raises several questions on which discovery is necessary, including:

i. What were the complex issues involved?;

ii. What were the qualifications needed to address them?;

iii. How much time was needed to address them?;

iv. Did these issues include costs?

c. The United States asserts that the priority of this rulemaking was low relative to other regulatory projects from 2001 to the present. Rabe Decl. ¶16. This assertion raises several questions on which discovery is necessary, including:

i. What were the other rulemaking projects that were given higher priority during the years mentioned?;

ii. How were the rulemaking projects given their priorities?;

iii. Why did the priority of this rulemaking decline in 2005?;

iv. What effect does the prioritization have on the timing of the rulemaking?;

v. Which of the other rulemaking projects were Congressionally mandated?

d. The United States argues that the Coast Guard is doing "everything it can," consistent with regulatory realities and priorities, to publish its final rule as quickly as possible. In fact, it argues, a final rule may be published by end of 2005. Rabe Decl. ¶¶ 18-19. This argument raises several questions on which discovery is necessary, including:

i. What additional actions are necessary before a final rule can be issued?;

ii. Who is responsible for those actions?;

iii. How much time will each of these actions take?;

iv. What competing priorities may interfere with these actions?

v. On what information does the Coast Guard base its estimate that a final rule may be published by the end of 2005?

17. Information which answers the foregoing questions is likely only available through the Coast Guard's responses to discovery.

18. Discovery on these and other issues would likely result in the production of material essential to further support The Coalition's claim that the Coast Guard's seven year delay in this case is not reasonable.

19. The Coalition should be allowed to conduct discovery before the Court considers the United States' motion.

**EXHIBITS**

20. Attached as Exhibit A is a true and accurate copy of the National Transportation Safety Board ("NTSB") Special Investigation Report: Postaccident Testing for Alcohol and Other Drugs in the Marine Industry and the Ramming of the Portland-South Portland (Million Dollar) Bridge at Portland, Maine, by the Liberian Oil Tankship *Julie N* on September 27, 1996 (1998) (the "NTSB Investigation Report"), available at http://www.ntsb.gov/publictn/1998/SIR9802.pdf.

21. Attached as Exhibit B is a true and accurate copy of relevant excerpts from Report of the Committee on Commerce, Science and Transportation on S. 1259, S. Rpt. 105-246 (1998) (the "Committee Report").

22. Attached as Exhibit C is a true and accurate copy of Marine Casualties and Investigations; Chemical Testing Following Serious Marine Incidents, 68 Fed. Reg. 9622 (proposed Feb. 28, 2003) (to be codified at 46 C.F.R. pt. 4) (the "NPR").

23. Attached as Exhibit D is a true and accurate copy of Marine Casualties and Investigations; Chemical Testing Following Serious Marine Incidents: Draft Regulatory Analysis for Notice of Proposed Rulemaking, USCG-2001-8773 (Dec. 19, 2002) (the "Draft Analysis"), as posted on the Department of Transportation's Docket Management System at http://dmses.dot.gov/docimages/pdf84/235149_web.pdf.

24. Attached as Exhibit E is a true and accurate copy of the NTSB's Most Wanted Transportation Safety Improvements: Improve Drug and Alcohol Testing of Crews After Accidents, available at http://www.ntsb.gov/Recs/mostwanted/marine_drug_test.htm.

25. Attached as Exhibit F is a true and accurate copy of the Complaint in United States v. Bouchard Transportation Company, Inc. Complaint (the "Criminal Complaint").

26. Attached as Exhibit G is a true and accurate copy of the Affidavit of Mark Rasmussen ("Rasmussen Aff.").

27. Attached as Exhibit H is a true and accurate copy of a publication of the National Oceanic and Atmospheric Administration ("NOAA") entitled Buzzards Bay Oil Spill in Massachusetts: A Cooperative Natural Resource Damage Assessment (2003), available at http://www.darp.noaa.gov/northeast/buzzard/pdf/bbfactsht.pdf.

28. Attached as Exhibit I is a true and accurate copy of an article which was published in the Boston Globe on June 29, 2003 entitled "Close Ties Complicate Probe of Oil Spill."

I declare under penalty of perjury that the foregoing is true and correct.

/s/ Jonathan M. Ettinger
Jonathan M. Ettinger

Date: July 12, 2005

**Exhibit A**

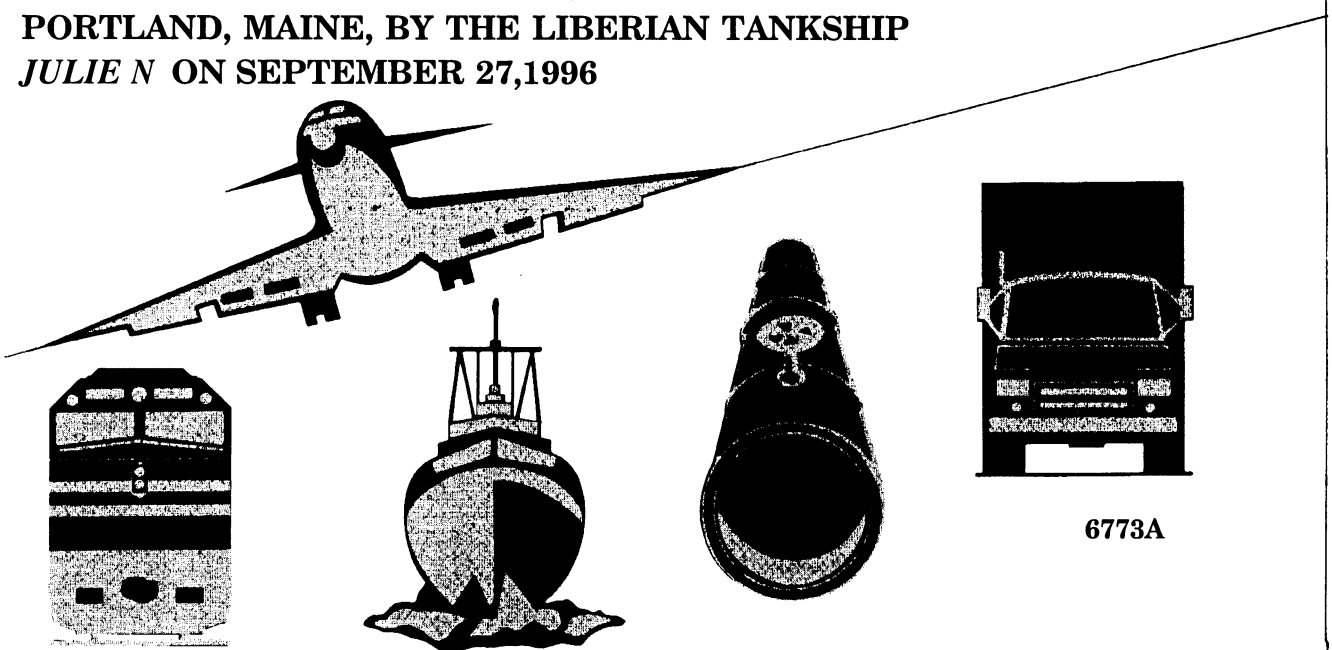
PB98-917003
NTSB/SIR-98/02

# NATIONAL TRANSPORTATION SAFETY BOARD

WASHINGTON, D.C. 20594

# SPECIAL INVESTIGATION REPORT

## POSTACCIDENT TESTING FOR ALCOHOL AND OTHER DRUGS IN THE MARINE INDUSTRY AND THE RAMMING OF THE PORTLAND-SOUTH PORTLAND (MILLION DOLLAR) BRIDGE AT PORTLAND, MAINE, BY THE LIBERIAN TANKSHIP *JULIE N* ON SEPTEMBER 27,1996



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**Abstract:** The 560-foot-long Liberian tankship *Julie N,* carrying a cargo of heating oil, collided with the south bascule pier of the Portland-South Portland (Million Dollar) Bridge in Portland, Maine, about 1105 on September 27, 1996. There were no injuries, but the collision resulted in a 33-foot-long hole in the vessel's hull beneath the waterline. About 4,000 barrels of oil spilled into the harbor. The vessel sustained about $660,000 in damage, and the cost for cleanup of the oil was approximately $43 million. Repairs to the Million Dollar Bridge were about $232,000. Because of the continuing problems encountered in conducting postaccident testing for alcohol and drugs, this report contains additional sections devoted to the discussion and analysis of postaccident testing.

The safety issues discussed in this report are postaccident testing for alcohol and other drugs and port safety.

As a result of its investigation, the National Transportation Safety Board issued recommendations to the U.S. Coast Guard, Maine Department of Transportation, Federal Highway Administration, and American Association of State Highway and Transportation Officials.

# POSTACCIDENT TESTING FOR ALCOHOL AND OTHER DRUGS IN THE MARINE INDUSTRY AND THE RAMMING OF THE PORTLAND-SOUTH PORTLAND (MILLION DOLLAR) BRIDGE AT PORTLAND, MAINE, BY THE LIBERIAN TANKSHIP *JULIE N* ON SEPTEMBER 27, 1996

## SPECIAL INVESTIGATION REPORT

**Adopted: May 5, 1998**
**Notation 6773A**

**NATIONAL TRANSPORTATION SAFETY BOARD**

**Washington, D.C. 20594**

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# EXECUTIVE SUMMARY


The 560-foot-long Liberian tankship *Julie N,* carrying a cargo of heating oil, collided with the south bascule pier of the Portland-South Portland (Million Dollar) Bridge in Portland, Maine, about 1105 on September 27, 1996. The vessel had passed between the piers of the new Portland-South Portland bridge (Casco Bay Bridge) and was en route to the Rolling Mills terminal about 1.2 miles beyond the Million Dollar Bridge. The vessel was under the direction of a State-licensed docking master (pilot). After the collision, the pilot stated that as the vessel approached the bridge, he had issued three orders for port rudder to swing the bow to the left and then intended to order the rudder to hard starboard and to increase the engine speed from slow to half ahead to stop the swing and align the vessel for passage through the drawspan. However, the pilot inadvertently ordered the rudder to hard port instead of hard starboard. He recognized his error within seconds and ordered the rudder to hard starboard; given the narrowness of the bridge span, however, the shifting of the rudder occurred too late to avoid the collision.

There were no injuries, but the collision resulted in a 33-foot-long hole in the vessel's hull beneath the waterline. About 4,000 barrels of oil spilled into the harbor. The vessel sustained about $660,000 in damage, and the cost for cleanup of the oil was approximately $43 million. Repairs to the Million Dollar Bridge were about $232,000.

After the accident, the pilot reported to a clinic for postaccident testing. However, he did not have his breath or blood tested for alcohol. The urine specimen collected for drug testing indicated that no drugs were present. The pilot stated that he was unaware that postaccident testing required a test of breath or blood for alcohol and that urine collection was solely for drug testing.

Over the course of 28 major accident investigations, the National Transportation Safety Board has observed confusion and a lack of understanding on the part of marine employers and employees regarding postaccident testing requirements and responsibilities. In many of these accidents, including that involving the *Julie N,* the Safety Board has been unable to definitively rule out alcohol or drug use as a causal factor because of serious deficiencies in the testing process.

Because of the continuing problems encountered in conducting postaccident testing for alcohol and drugs, this report contains additional sections devoted to the discussion and analysis of postaccident testing.

The National Transportation Safety Board determines that the probable cause of the collision with the Portland-South Portland (Million Dollar) Bridge was the pilot's inadvertent order port (left) rudder instead of starboard (right) rudder. Contributing to the accident was the narrow horizontal clearance of the bridge drawspan, which afforded little leeway for human error. Contributing to the severity of the damage to the vessel and to the amount of oil spilled was a corner of the bridge pier that was not adequately shielded by the timber fender system.

The safety issues discussed in this report include:

- Postaccident testing for alcohol and other drugs, and
- Port safety.

As a result of its investigation, the Safety Board made recommendations addressing these issues to the U.S. Coast Guard, Maine Department of Transportation, Federal Highway Administration, and American Association of State Highway and Transportation Officials.

# INTRODUCTION

The 560-foot-long Liberian tankship, *Julie N*, collided with the south bascule pier[1] of the Portland-South Portland (Million Dollar) Bridge in Portland, Maine, about 1105 on September 27, 1996. The vessel was under the direction of a State-licensed docking master (pilot). After the collision, the pilot stated that as the vessel approached the bridge, he had issued three orders for port rudder to swing the bow to the left and then intended to order the rudder to hard starboard to stop the swing and align the vessel for passage through the drawspan. However, the pilot inadvertently ordered the rudder to hard port instead of hard starboard. He recognized his error within seconds and ordered the rudder to hard starboard; given the narrowness of the bridge span, however, the shifting of the rudder occurred too late to avoid the collision. Since then, the State of Maine has replaced the bridge with one that has more horizontal clearance and an improved fender system more capable of buffering ship contact.

After the accident, the pilot reported to a clinic for postaccident testing. He submitted a urine specimen but did not have his breath or blood tested for alcohol. The pilot stated that he was unaware that postaccident testing required a test of breath or blood for alcohol and that urine collection was solely for drug testing.

The National Transportation Safety Board did not find evidence that drug or alcohol use was a causal factor in this accident or in the other major marine accidents that it has investigated since the *Exxon Valdez* in 1989. However, in many of these accidents, including that involving the *Julie N*, the Safety Board has been unable to definitively rule out alcohol or drug use as a causal factor because of serious deficiencies in the testing process.

Over the course of 28 major marine accident investigations, the Safety Board has observed confusion and a lack of understanding on the part of marine employers and employees regarding postaccident testing requirements and responsibilities. Testing has been delayed as long as 42 hours or never even been conducted. On occasion, employers have been unsure of what samples to collect, preventing a complete or meaningful toxicological analysis.

The Safety Board does not plan to wait for a drug- or alcohol-related marine accident to address the problems associated with postaccident testing. Therefore, in addition to the port safety issues cited as contributing factors to the *Julie N* accident, this special investigation report will focus on the following postaccident testing issues:

- Timeliness of and accountability for testing,
- Testing and enforcement responsibilities, and
- Consistency of U.S. Coast Guard regulations with one another and with the regulations in other transportation modes.

As a result of this special investigation, the Safety Board is making recommendations to the Coast Guard to improve the postaccident testing process and its enforcement.

[1]Pier supporting a leaf (roadway), counterbalance weight, and machinery of a bascule bridge. The term bascule, derived from the French word for seesaw, is a type of bridge that lifts at one end to a near-vertical position to permit vessels to move past the bridge.

# INVESTIGATION

## The Accident

The 560-foot-long Liberian tankship *Julie N* loaded a cargo of heating oil at Amuay Bay, Venezuela, and then departed Amuay Bay on September 21, 1996. The vessel proceeded directly to Portland, Maine, arriving at the Portland Sea Buoy on September 26 at 2200. All prearrival tests of the vessel's navigation equipment were conducted as required by Coast Guard regulations at 33 *Code of Federal Regulations* (CFR) 164.25 and found satisfactory. About 2215, a Portland bar pilot boarded the vessel near the sea buoy and brought it to the Diamond Island Roads General Anchorage B. The starboard anchor was let go at 2240 and the vessel was secure at 2248, awaiting high tide for docking the next morning. Shortly afterwards, the bar pilot departed the vessel. The draft upon arrival Diamond Island Roads anchorage was 34 feet, 11 inches (salt water), even keel.

The next morning, September 27, the crew completed the predeparture tests of the vessel's steering, propulsion, and navigation equipment required by Coast Guard regulations (33 CFR 164.25). All equipment was found in satisfactory condition. About 0930, the State-licensed docking master (pilot), who was to pilot the *Julie N*, boarded the tugboat *Captain Bill* at the Bath Iron Works (BIW) shipyard for the trip to the anchorage. The other tugboat that would be assisting in docking the vessel, *Fournier Boys*, was also present and proceeded with the *Captain Bill* en route to the anchorage.

About 1010, the tugs arrived in the anchorage; the pilot boarded the *Julie N* about 1015. Upon arriving on the vessel's bridge, the pilot met with the master and described the mooring arrangement and mooring lines needed at Rolling Mills Terminal, the vessel's destination in the inner harbor. The master had been to the Rolling Mills Terminal before with another pilot, and he also had a diagram of the berth and the mooring line arrangement. The master advised the pilot that the vessel was on an even keel and that the draft was 34 feet 11 inches. The draft was confirmed by the master of the tug *Captain Bill*. The master stated that a pilot card listing the vessel's dimensions and maneuvering characteristics was posted in the wheelhouse. The pilot did not review the pilot card because he had piloted the vessel on one other occasion under a different master and recalled that the vessel handled well. The pilot said that for future reference, he regularly recorded the pilot card information of vessels that he had piloted, and he had referred to that information regarding the *Julie N* before boarding the vessel.

When the discussion about the mooring was completed, the pilot asked the master to raise the anchor and at about 1025 the crew began to do so. At the time, the *Julie N* was heading in a southerly direction due to the flood tide. The pilot had the tug *Captain Bill* take a position along the ship's port bow.

At 1030, the anchor was aweigh (clear of the bottom), and the pilot ordered the *Julie N's* rudder to hard starboard and had the *Captain Bill* come full ahead pushing on the ship's port bow. With the ship's engines at stop, the pilot used the tug to swing the ship's bow toward the Portland Pipeline Pier terminal, a heading of approximately 220°. At 1036, the pilot ordered slow ahead on the *Julie N*'s engines and proceeded out of the anchorage with the *Captain Bill* continuing to push full ahead on the port bow. (See figure 1.) The third mate was operating the engine order telegraph and supervising the helmsman. When the pilot was out on the wings of the bridge, the master, who had accompanied the pilot, used a portable radio to relay the pilot's orders to the third mate and helmsman. The third mate received and acknowledged the orders from the

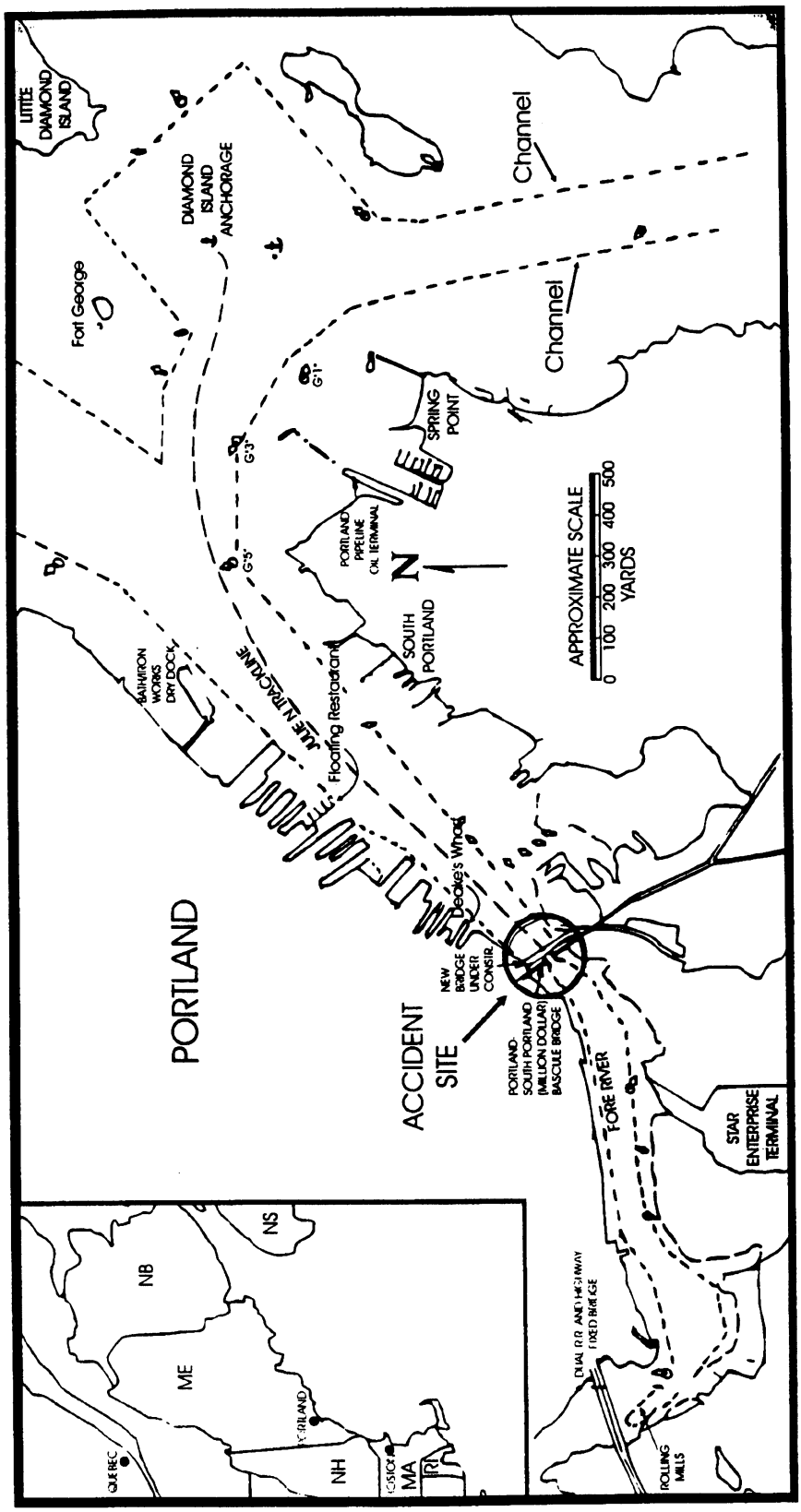



**Figure 1—Chart of the area.**

master on another portable radio. The deck cadet maintained the bell book.[2]

As the vessel proceeded out of the anchorage, the pilot made his first call on channel 13 VHF/FM radio to the bridge tenders (two operators on duty) at the Million Dollar Bridge to advise them that the *Julie N* was proceeding inbound and that a bridge opening would be needed. He said that he would call again when the ship passed the BIW drydock.

The last 30 minutes of flood tide (current)[3] was still running when the ship entered the channel adjacent to Diamond Island anchorage. At 1040, when the *Julie N* was passing channel buoy G1, the pilot ordered the *Julie N*'s rudder amidships, stopped the *Captain Bill*, and ordered the tug to come along the ship's starboard bow and put up one assist line. The pilot also directed the *Fournier Boys* to take a position approximately 50 feet off the *Julie N*'s port bow. At 1043, the pilot reduced the vessel's engine speed to dead slow ahead. At 1044, the vessel passed channel buoy G3, and at 1048, it passed buoy G5. Shortly after passing buoy G5, the pilot commenced a slow port swing and steadied the vessel on a heading toward the end of the BIW drydock. As the vessel approached the BIW drydock, the pilot, using various rudder commands, put the vessel in another slow turn to the left. The pilot stated that after leaving the anchorage he used different rudder commands to get a feel for how the vessel handled at slow speeds. According to the pilot, the vessel handled well. The pilot also later stated that the crew responded promptly and correctly to his orders.

When the *Julie N* passed the BIW drydock, the pilot made his second radio call to the Portland bridge tenders. He advised them that the ship was passing the BIW drydock and that he would be asking for a maximum standard opening because of the ship's high antennas. At this time, the pilot, using what he described as his "customary reference points" on shore, directed the vessel onto a southwesterly course favoring the Portland (north) side of the channel.[4] The pilot kept the vessel at dead slow ahead, about 4.5 knots. Later, as the vessel passed a floating restaurant approximately 2,500 feet from the bridge, the pilot called the bridge tenders on VHF radio and asked for the opening of the bridge.

The pilot and one other pilot stated that while approaching the bridge, they determined the vessel's lateral position in the channel by observing the relative positions of a cargo manifold and a walkway at the Star Enterprise Terminal and a tree ahead on the bank of the river, as well as the north bridge fender system and lights on the fender system at night.

The pilot later explained that he normally conned[5] an inbound ship from a position near the outboard side of the starboard bridge wing, which enabled him to judge the distance between the starboard side of the ship and the north fender system of the bridge. He stated that he normally tried to place the vessel so that there would be about 1 foot between the vessel's starboard side and the fender system protecting the bridge. The pilot and two other pilots later explained that the water between the forward part of the vessel and the pier acts as a cushion that tends to hold a vessel off of the pier.[6] The pilot explained that at some point, about 1,000 feet from the bridge, he normally altered the vessel's heading to the left and then back to the right to approach the north fender system at a slight angle. The pilot stated that in this case, however, he was concerned with the *Julie N*'s antennas clearing the leafs of the open bascule span, which he stated provide a minimum clearance at the top of the leafs of about 85 feet. The pilot stated that he was also concerned about

[2]A record of engine orders transmitted to the engineroom. A similar record of orders received from the bridge, the engineroom bell book, was kept in the engineroom.

[3]The flood (rising) tide produced a northerly current in the vicinity of Spring Point and Diamond Island Anchorage.

[4]For an excerpt from the pilot's sworn testimony describing his piloting of the vessel, see page 35 of this report.

[5]To conduct or direct movements of a vessel by issuing steering and engine orders.

[6]The *Julie N* is 86.3 feet wide; the horizontal clearance in the drawspan of the Million Dollar Bridge was 98 feet.

the 11.2-foot high tide, which was 2 feet above normal, because it increased the possibility that the antennas could contact the bridge leafs. He stated that because of his concern about the antennas clearing the bridge, he had decided to place the vessel on the centerline of the bridge drawspan instead of passing very close to the fender system protecting the north bascule pier. The pilot noted that in November 1995, the north (Portland side) bascule leaf did not raise fully and that the bridge wing of the ship *Overseas New Orleans* had struck the leaf, causing damage to the vessel and bridge. The *Overseas New Orleans* was being piloted by another pilot at that time. With the *Julie N* on the centerline of the drawspan, there would be about 6 feet of clearance on each side of the vessel.

At the time, a new bridge (Casco Bay Bridge) located immediately downstream (east) of the Portland-South Portland (Million Dollar) Bridge was under construction, making it necessary for pilots to release the tug normally made fast (connected by a line to the larger vessel) on the starboard bow before passing the piers of the new bridge. (See figure 2.) The pilot stated that releasing the tug earlier rather than closer to the old bridge had no effect on how he piloted vessels through the drawspan of the old bridge. Also, a portion of the approach fender system for the south bascule pier had been removed to facilitate locating a construction barge near the pier. The pilot stated that the work barge did not encroach into the channel and had no effect on piloting ships through the bridge. Other pilots also stated that releasing the tug earlier and the bridge construction, such as the location of the work barge, had little effect on piloting vessels through the old bridge draw.

After making another minor heading adjustment and subsequently passing Deake's Wharf, approximately 1,000 feet from the Million Dollar Bridge, at approximately 1100, the pilot determined that the vessel was slightly more to the right than normal, but he was satisfied with the approach. An expanded trackline developed by the Safety Board based on the course recorder indicated that the starboard side of the vessel was nearly in line with the north fender system as the pilot desired. (See figure 3.) The pilot stated that the last of the flood tide, that was flowing up river, may have moved the vessel a little to the right. The pilot later stated that he preferred a slight following current[7] when proceeding through the bridge. At this time, the pilot released the *Captain Bill*, which was made up on the starboard bow and instructed the tug to back clear and take a position off the *Julie N*'s starboard quarter. The pilot, following customary practice, ordered the tug *Fournier Boys* to proceed ahead through the Million Dollar Bridge to await the vessel on the other side of the bridge.

The pilot started the normal port swing to bring the ship away from the Portland (north) side of the channel for final approach to the bridge. To start the turn, the pilot initially ordered port 5° and then port 10° of rudder. When the vessel did not start to swing to the left in response to the port 10°, the pilot ordered the rudder increased to port 20°. Moments later, the vessel's bow began to swing slowly to the left.

At 1104, the pilot ordered slow ahead on the vessel's engines. The *Julie N* was now slowly swinging to the left with port 20° of rudder. The pilot said he had intended to order the rudder to hard starboard and increase engine speed to half ahead when the bow of the vessel was almost on the center axis of the bridge opening. The pilot stated that the approach to the bridge was progressing correctly and that all he needed to do was order hard starboard rudder. He stated that, following the planned hard to starboard order, he had intended to reduce the rudder, possibly to starboard 20° or 10°, then amidships, and then possibly order port rudder.

About 1105, the pilot ordered hard port rudder instead of hard starboard. According to the pilot, he ordered half ahead immediately after the rudder command. When the *Julie N*'s master, who was passing the pilot's orders to the helmsman, repeated the order "hard to port," the pilot stated that he heard the repeated order and realized that he had

[7] A current flowing in approximately the same direction that the vessel is moving.

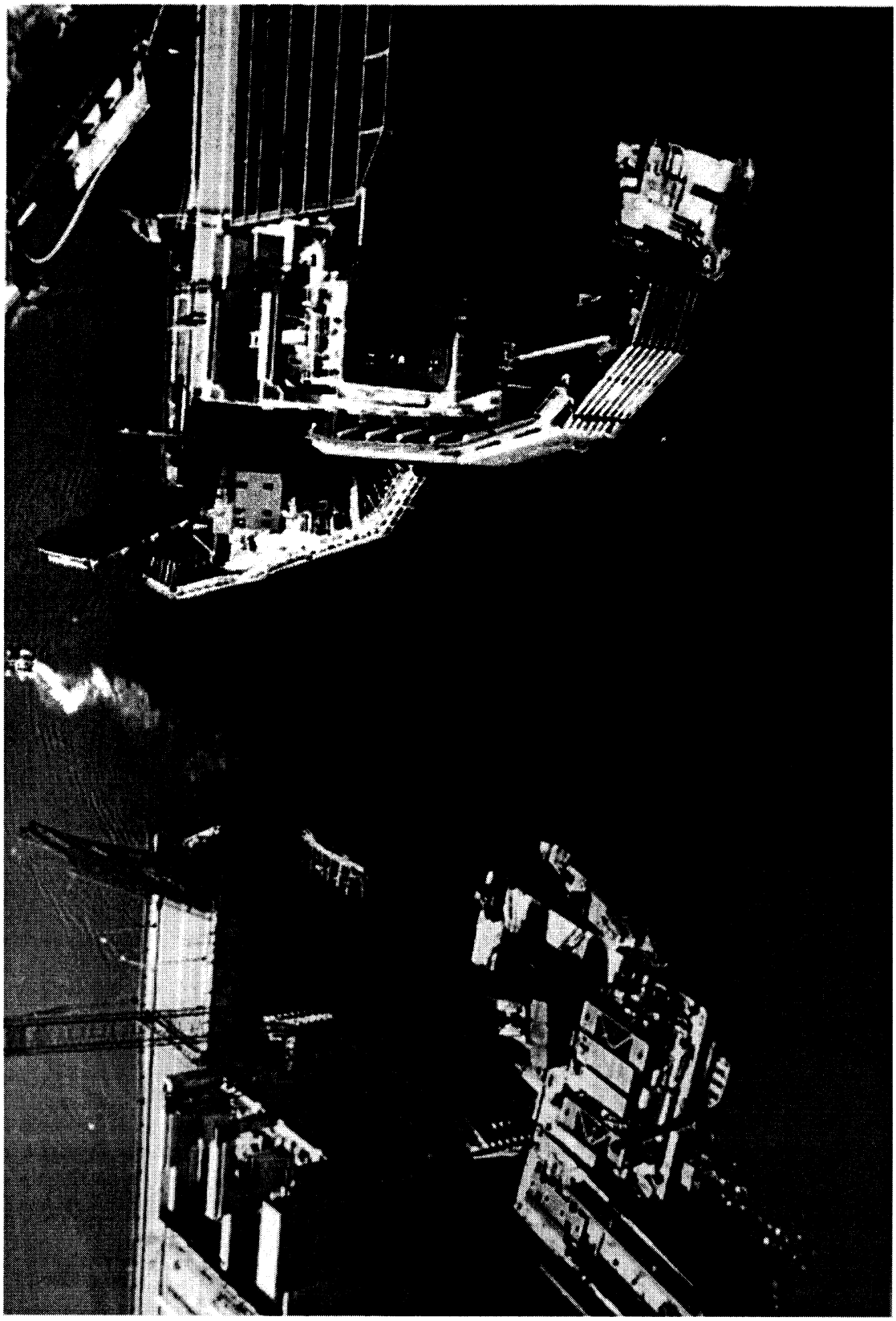


Figure 2—Aerial photograph of old and new bridgess.

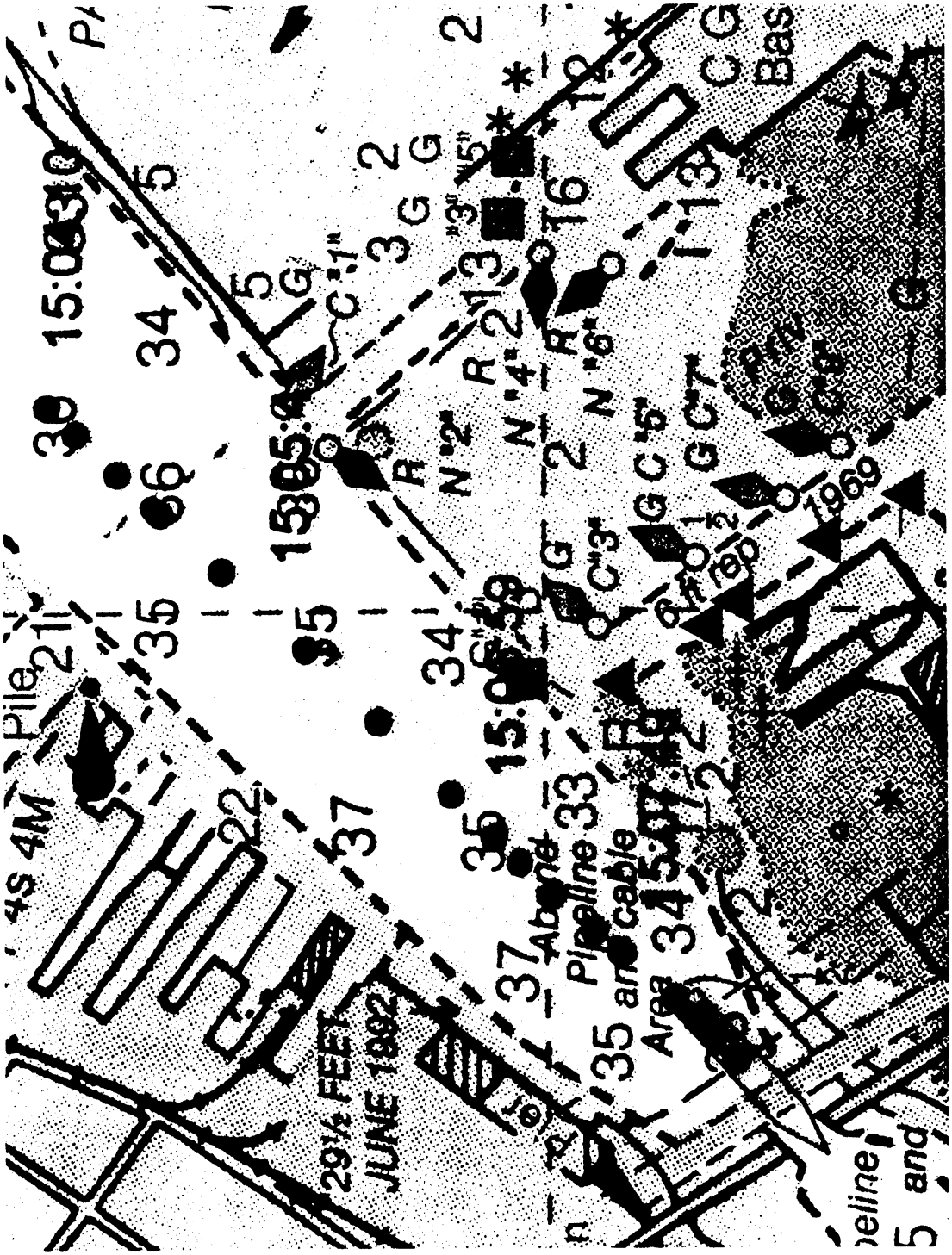



Figure 3—Expanded trackline based on the vessel's course recorder.

said port instead of starboard. The pilot said that he immediately yelled "hard to starboard." (See figure 4.)

The master recalled that the vessel was approaching the bridge in a normal manner and that when the vessel was about three ships' lengths from the bridge, the pilot ordered the rudder to port 10°; a few moments later, the pilot ordered the rudder to port 20°. According to the master, when the vessel was about one ship's length from the bridge, the pilot ordered hard port rudder. This was quickly corrected by the pilot by an order for hard starboard.

According to the pilot, the vessel's engines had already come up to half ahead rpm (60 rpm for 8.3 knots) and the rudder had gone over to hard port before he gave the correct order for hard to starboard. The pilot stated that issuing the incorrect order had allowed the vessel to overshoot the range. (Tests later revealed that the rudder would swing from port 20° to hard port 35° in about 6 seconds.) According to the pilot, the *Julie N* started to swing slowly to starboard in response to the hard starboard order, but moments later the port bow impacted the timber fendering extending from the south bascule pier and then struck the masonry pier and steel superstructure of the bridge. The pilot and crew estimated the time of collision at shortly past 1105. (See figure 5.)

After striking the South Portland pier, the vessel's bow swung right and struck the fendering on the Portland (north) side of the bridge. At 1109, the pilot ordered the rudder to amidships and the engines to slow astern. At 1110, the pilot ordered engines stopped. The *Julie N*, due to its forward momentum, drifted through the drawspan. The master of the *Captain Bill* informed the pilot that the vessel's antennas were passing clear of the bascule leafs of the bridge span, and the pilot acknowledged.

At the time, the extent of vessel damage was unknown, but the vessel was rapidly leaking oil into the water and settling noticeably by the bow. The pilot requested the master of the tug *Captain Bill* to call the Star Enterprise Terminal in South Portland on his cellular telephone and inquire whether Star Enterprise could receive the *Julie N* at its terminal. The Star Enterprise terminal was the closest pier, being 1,200 feet away. The pilot believed that docking at that terminal would enable the vessel to be surrounded with oil containment booms about 20 to 30 minutes sooner than possible by proceeding to Rolling Mills. The pilot believed that mooring at the Star Enterprise terminal, besides reducing pollution, would prevent the vessel from possibly grounding and blocking the channel.[8] Meanwhile, the pilot used dead slow ahead, stop, and slow astern engine orders to hold the ship in position, and he ordered the tug *Captain Bill* made fast on the starboard quarter and *Fournier Boys* made fast on the starboard bow. A few minutes later, about 1120, the master of the *Captain Bill* called back and informed the pilot that the Star Enterprise Terminal could not receive the *Julie N* because the cargo was not blended properly (not compatible with product in the Star Enterprise storage tanks). The pilot then ordered the *Julie N* to half ahead and proceeded toward the Rolling Mills Terminal.

The pilot stated that the vessel handled poorly because of the increased draft at the bow. The pilot continued upriver on various engine speeds until arriving in the turning basin. The two tugs assisted the ship into the Rolling Mills Terminal, where the line handlers were waiting, and the vessel's lines were quickly put over to the dock. The first line was over to the dock at 1145. At 1210, the pilot released the tugs and oil containment booms were put in place around the vessel. The vessel was secure in its berth at the Rolling Mills Terminal at 1220. About 1230, the pilot left the vessel and went aboard the *Captain Bill,* which was moored nearby.

## Injuries

No injuries occurred as a result of this accident.

[8]The channel depth listed on the chart varied from 35 to 36 feet mean low water but was somewhat less due to a lack of maintenance dredging. The high tide of 11.2 feet would increase the channel depth to approximately 45 feet at the bridge.

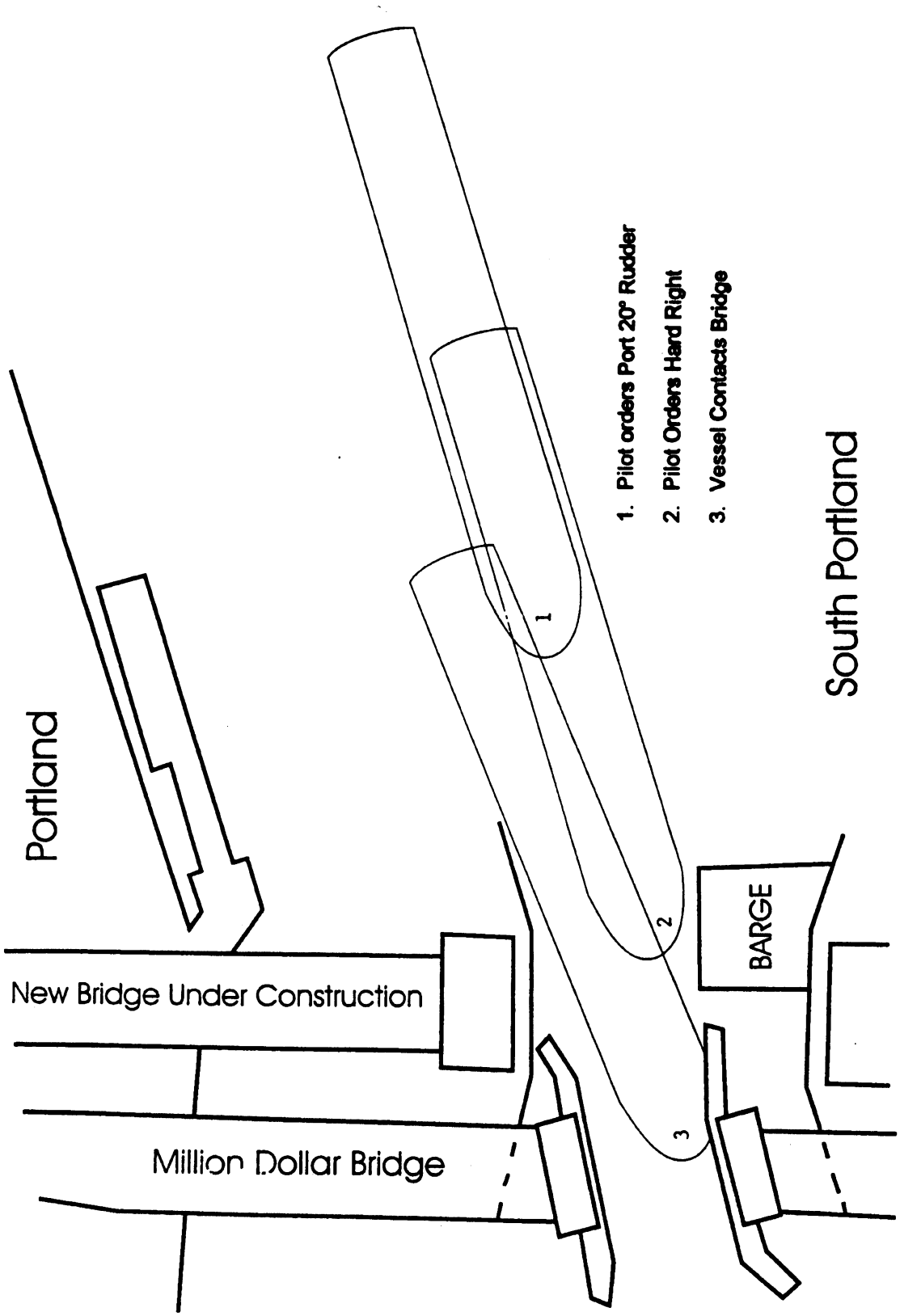



Figure 4—Sketch by the master of the vessel's approach to the pier.

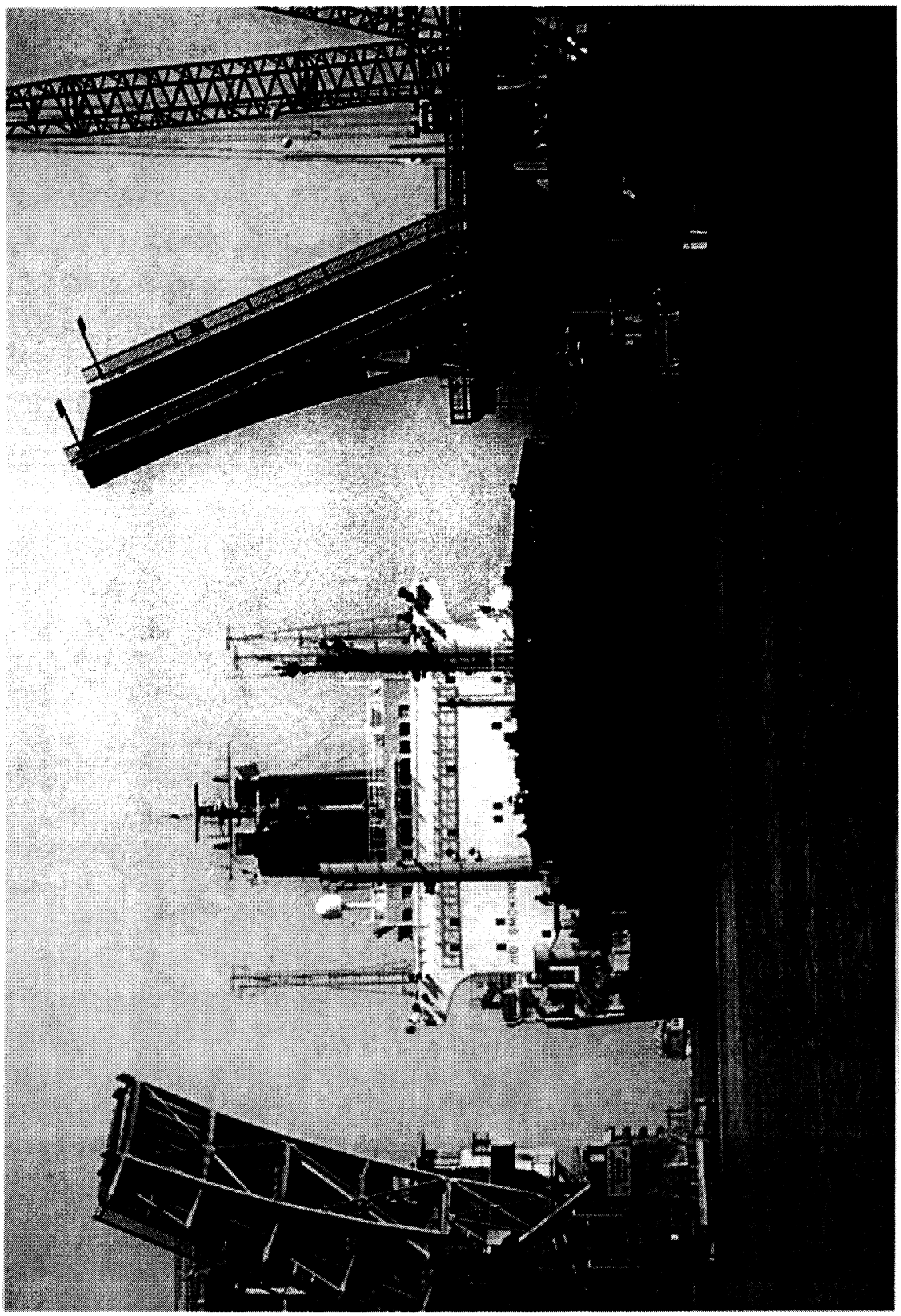


Figure 5—Accident site (photograph by Mr. Bill Jewel, Portland, Maine).

## Vessel Damage

From October 17 to 19, 1996, Lloyd's Register of Shipping surveyors and Coast Guard marine inspectors examined the damage to the bow, forward port-side hull plating, and the associated internal steel structure and piping. Overall damage to the port bow consisted of welded steel plating that was set-in (pushed inward into the hull), buckled, and torn, above and below the waterline. (See figure 6.) The collision penetrated the tankship's single hull (0.5-inch thick) and opened it to the sea from the forepeak ballast tank aft through the port heavy-fuel-oil deep tank, a void space, and the No. 1 port cargo oil tank.

The lowest tear in the steel hull plating, between longitudinal Nos. 17 through 21 near the turn of the bilge, extended aft horizontally about 33 feet overall and was approximately 13 feet wide. The tear began near the bottom of the forepeak ballast tank, just aft of the bulbous bow at frame No. 82, and ended in the No. 1 port cargo tank, at frame No. 72 ½. This large tear opened the heavy-fuel-oil tank, the void space, and the No. 1 port cargo oil tank to the sea. About midway between the upper and lower damage, the hull plating was set-in deeply and torn between frame Nos. 78 and 72 ½ and from longitudinal Nos. 26 through 31. The damage to the upper bow plating, from frame Nos. 72 through 81 between longitudinal Nos. 34 through 39, opened the forecastle compartment, the uppermost section of the fuel oil tank, and a void space to the atmosphere.

About 2,000 barrels of bunker (fuel) oil was spilled from the forward fuel oil tank and slightly more than 2,000 barrels of the cargo of heating oil was spilled from No. 1 port cargo tank.

Before the *Julie N* arrived at Rolling Mills Terminal, Maritime Overseas Corporation (MOC) instructed the Marine Spill Response Corporation (MSRC)[9] oil spill response vessel *Maine Responder* and OSRO Clean Harbors, Inc., to initiate the cleanup operation. The Coast Guard Captain of the Port Zone secured vessel traffic in Portland Harbor and established a marine safety zone. The Million Dollar Bridge remained in the open position, pending inspection and repairs.

The cleanup was conducted by Amity Products Carriers as the owner of the *Julie N* and the "responsible party" under the Oil Pollution Act of 1990 (OPA 90). The cleanup lasted until November 14, 1997, and cost approximately $43 million. This figure does not include claims for property or other damage. The cleanup operation resulted in the recovery of 78 percent of the spilled oil.

After the cargo was discharged, the vessel's ballast was adjusted to raise the bow and to list the vessel to starboard to facilitate temporary repairs at the Rolling Mills berth by BIW. When BIW completed the temporary repairs, the *Julie N* was examined again by Lloyd's surveyors and Coast Guard inspectors. Following the examination, the tankship was permitted to sail directly from Portland on October 19, 1996, to a shipyard in Europe, on a southerly course, at reduced speed, and ballasted as agreed with Lloyd's Register of Shipping and the Coast Guard. The *Julie N* arrived at the shipyard at Astano, Spain, on November 8, 1996, and departed on December 7, 1996, with all permanent repairs completed to the satisfaction of Lloyd's Register of Shipping.

The total cost of repairs was about $660,000. This cost does not include the lost revenue, tank cleaning, or transit to the shipyard.

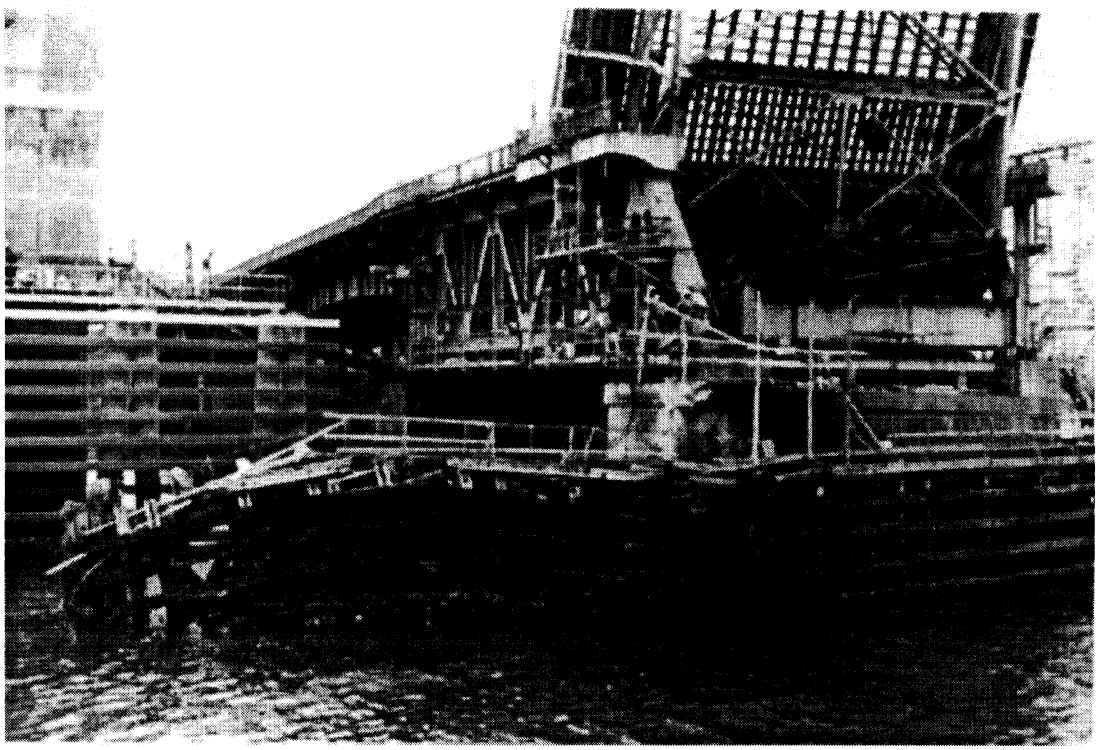
## Bridge Damage

The Maine Department of Transportation (MDOT) conducted a postaccident condition survey on September 28, 1996, to ascertain the damage to the bridge. (See figure 7.) The survey indicated that pier 18 (South Portland side) had temporarily shifted over 4 inches horizontally and came to rest with a permanent horizontal set of 1 ¾ inches. The pier had also apparently moved upstream by a distance of 1 ¼ inches. The MDOT also inspected the underwater portions of the pier 18 channel face and initially found no

[9]MSRC is a company formed by the major oil and shipping companies to respond to major oil spills.


**Figure 6—Vessel damage *(left)*.**

**Figure 7—Bridge damage *(below)*.**



evidence of distress or disturbance of the marine growth covering the masonry.

Further underwater surveying on September 30, 1996, between piers 18 and 19 found "definite scraping and a section loss of concrete on the shaft [lower pier] below waterline exposing No. 9 [1 1/8 inch in diameter] reinforcing bar in outer corner [northeast corner] approximately 6 inches below stone course." The spalled (chipped) concrete measured about 6 inches by 6 inches. (Superimposing of the frame of the vessel revealed that this corner of the pier had contacted the vessel, resulting in the approximately 33-foot-long tear in the vessel's underwater hull. In addition, a section of granite pier cap was broken off the easterly end, channel side, of pier 18.) (See figures 8 through 10.)

Damage was also sustained by the superstructure. On pier 18, the live-load shoe was displaced several feet, along with the live-load girder and the pedestal-shaped shoe underneath the girder, which had rested on the concrete pedestal on the pier. (The live-load girder frames back into the transverse floor beam at the next panel point on the outside truss. The girder is stabilized by a brace attached to the end point of the truss. The end of the truss also bears on the concrete pedestal). In addition, the truss experienced movement of 1 to 2 inches, and the center lock of the leafs at the channel centerline was misaligned about 3 inches.

The MDOT hired the contractor building the new bridge to make the repairs, and the bridge was functioning again on September 29, 1996.

The cost of repairs to restore the bridge to normal operation was approximately $32,000. In October 1996, the MDOT replaced the damaged wooden fender system at pier 18 with a steel structure that provided extra shielding for the corner of the pier that the vessel's hull contacted to create the long underwater opening. The cost of the new fender system was about $200,000, for a total cost of $232,000.

## History of the Portland-South Portland (Million Dollar) Bridge

The permit for the Portland-South Portland (Million Dollar) Bridge, issued by the Secretary of War in 1893, approved a bascule span providing a horizontal clearance of 100 feet. The bridge was designed in 1914 and opened to traffic in 1916. It replaced a swing-span bridge, and the south bascule pier (pier 18) of the new bridge incorporated the pivot pier of the old bridge. The bridge was originally owned by Cumberland County but was transferred to the MDOT in 1959.

The bridge consisted of 33 approach spans and a double-leaf bascule span over the channel. The bascule span was supported by piers 18 (south pier) and 19 (north pier).

According to the October 1986 MDOT report[10] to the Coast Guard Marine Safety Office, Portland, Maine, 46 cases of bridge damage by various vessels occurred between January 1976 and May 1986. Two more cases were recorded in 1987 and one more in 1988. And, from 1989 to 1996, 22 collisions with the bridge or fender system were recorded. Over half of the collisions involved barges, usually empty barges, and the remainder involved ships.

***Bridge Fender System (Past and Present and Repairs)***—The original fender system protecting piers 18 and 19 consisted of wooden timber construction and afforded 100 feet of horizontal clearance. The original fendering system consisted of vertical oak buffer piles, about 43 feet long, placed from just below the mean low water line to about 5 feet below the top of the pier, with 5- by 12-inch horizontal timbers (wales). The bottoms of the piles were wedged into 10-inch-diameter round holes formed in the concrete footing.

A review of the MDOT's bridge files indicated that the fendering system has been

[10] *Portland Bridge Fender Damage Summary of Bridge Operator Reports*, October 1986.

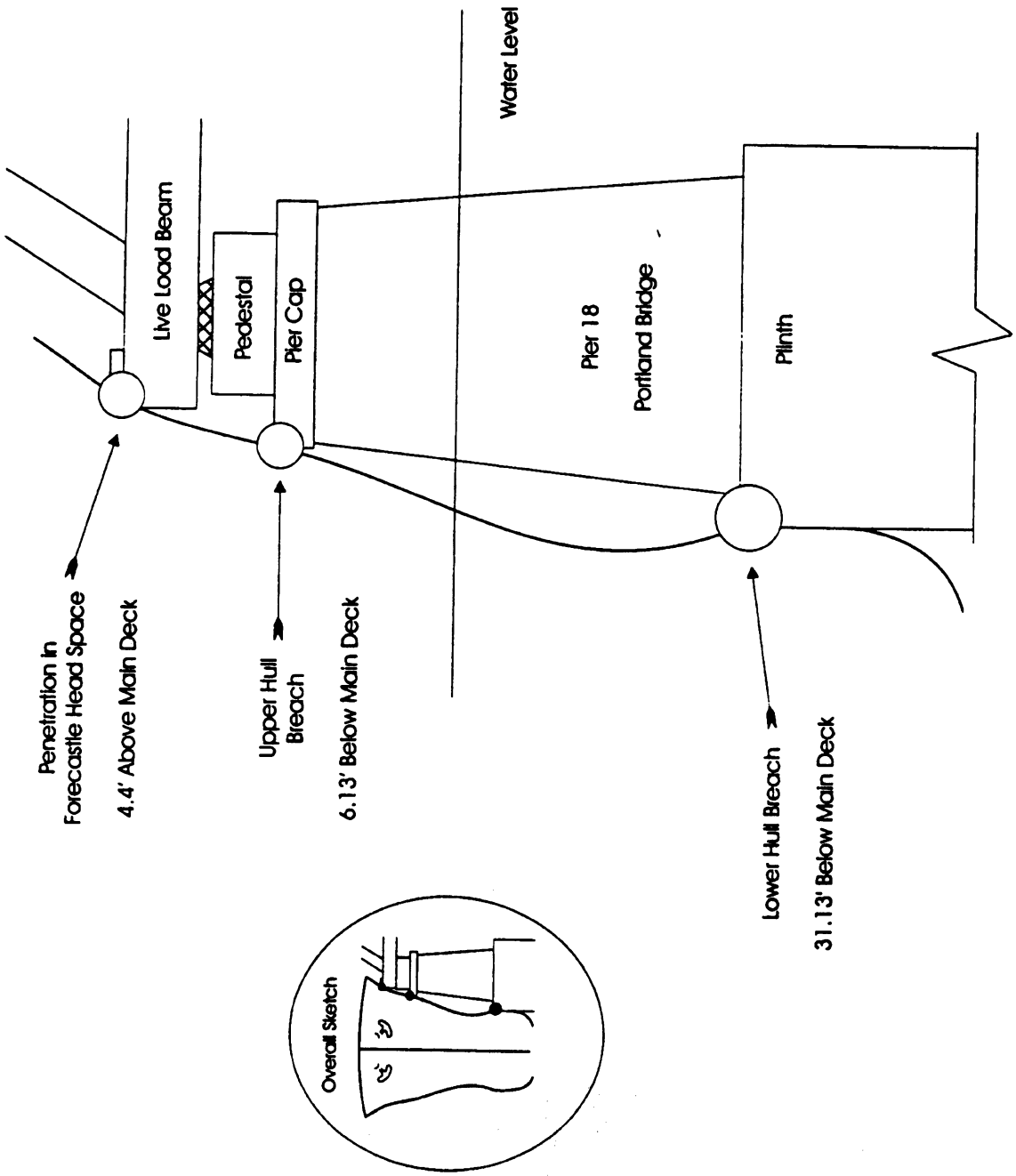



**Figure 8—Outline of the vessel superimposed on the bridge pier.**

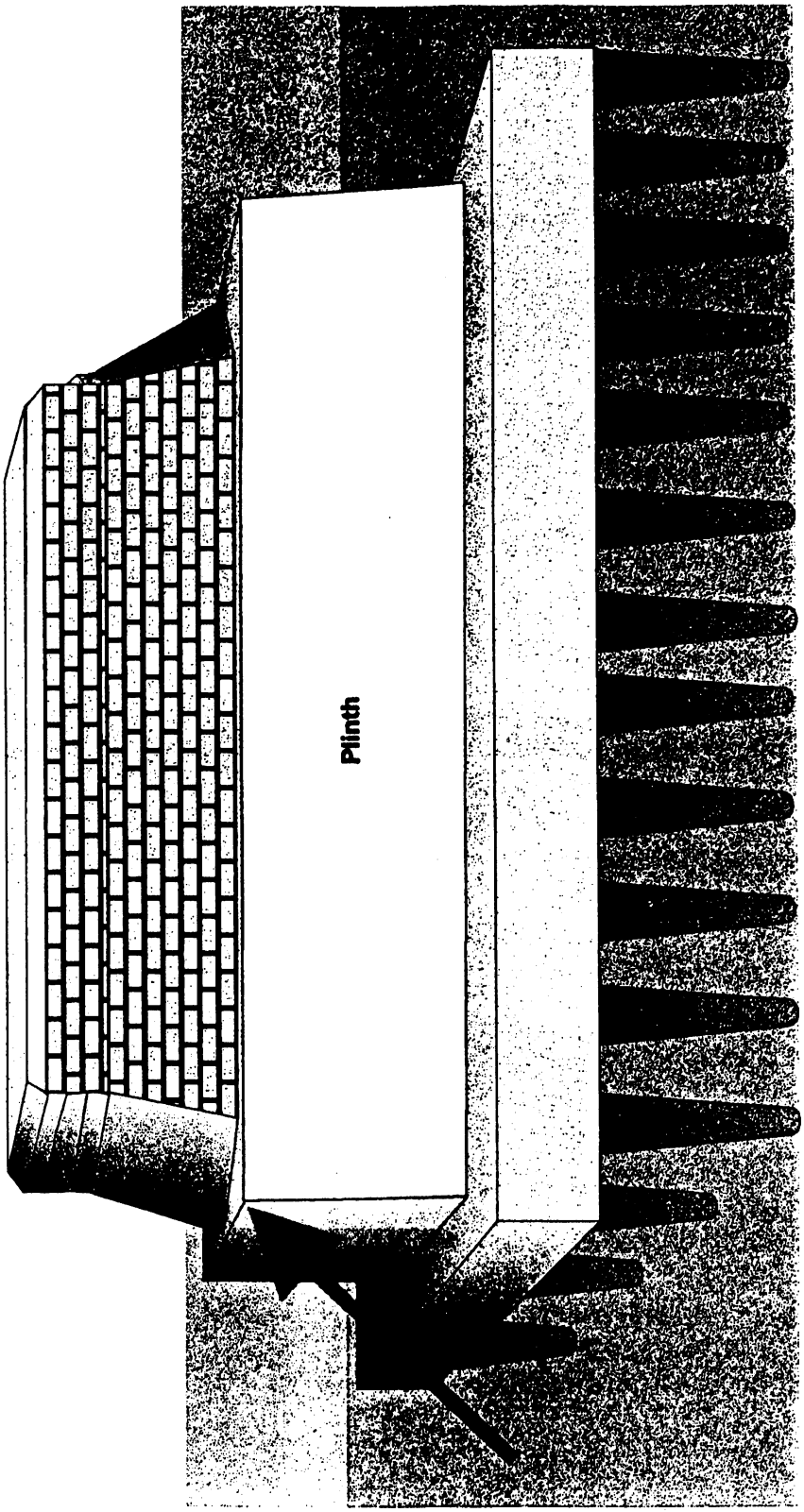



Figure 9—Diagram of pier 18 without the fender system. (arrow indicates the area of contact with the lower hull).

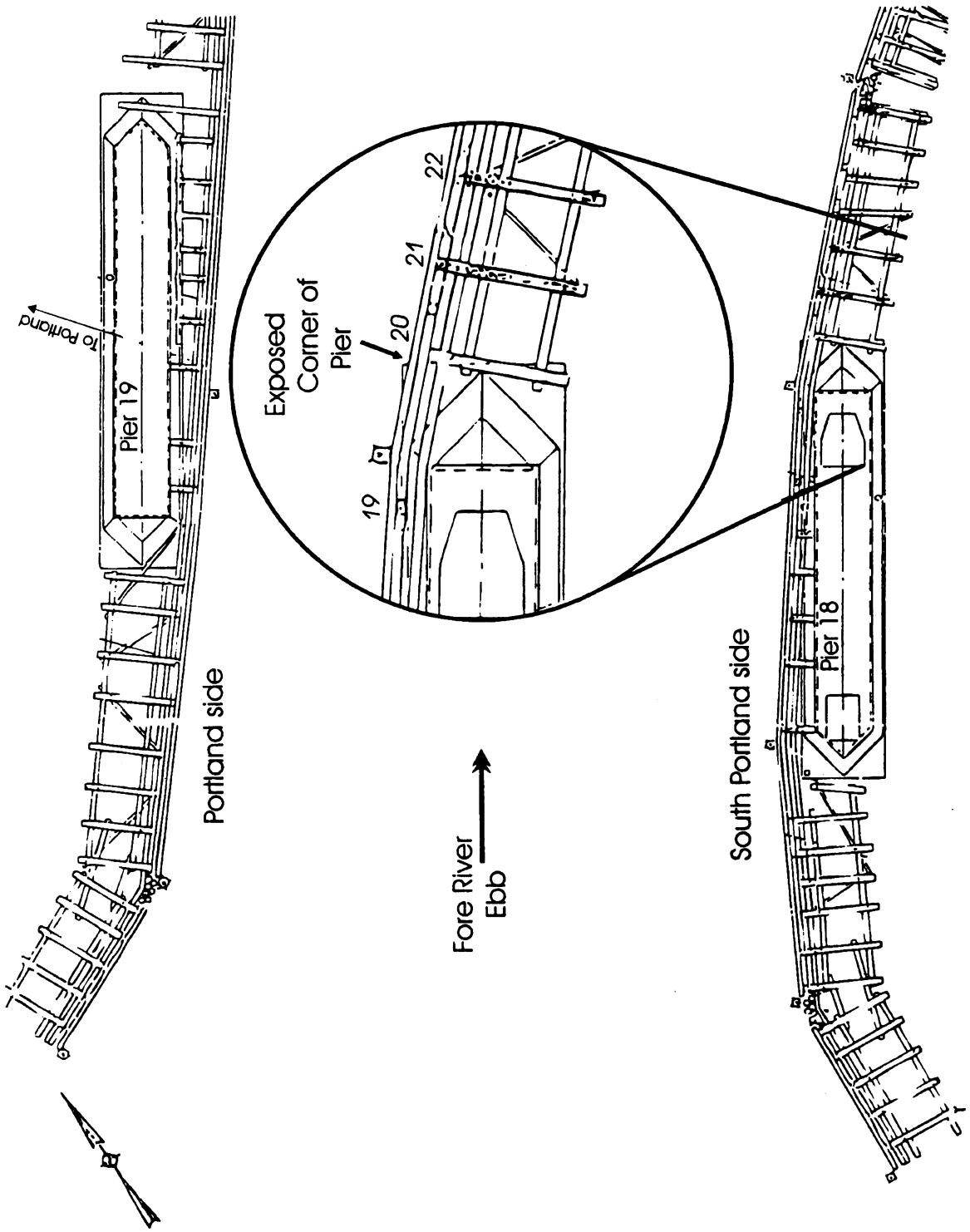



**Figure 10—Plan of fender system showing exposed corner of pier.**

changed many times since the initial construction. A major change occurred in 1949, following a change in channel alignment. The purpose of the 1949 alteration was to make the face of the fenders parallel to the revised channel axis. This resulted in decreasing the horizontal clearance to 97 feet 4 inches. MDOT records show that from 1949 to 1992, changes were made in the design of the structure, but the faces of the fender system remained parallel to the channel. No channel width data were given with the changes.

An underwater survey conducted by the MDOT after the *Julie N* accident indicated that the vertical piles along pier 18 were not in the sockets in the footing and that the fender system along the pier did not reach the bottom. Instead, the verticals of the fender system went below low tide while the bottommost wale remained above the mean low water line. It could not be determined when the full vertical timbers had been removed. According to a 1992 plan, the corner of the rectangular plinth (lower section of the pier) extends a short distance in front of the fender. (This was the corner which the vessel's hull contacted to initiate the 33-foot-long tear.) (See figure 10.) The 1992 plan shows the approach fender system flaring away from the piers; it consisted of a series of "bents,"[11] with a cluster of "dolphins"[12] at the end of six bents. An additional four bents increased the flare. Some of these bents had been removed before the accident to provide room for a barge being used for the construction work on the new bridge.

The new (temporary) steel fender system constructed soon after the accident and attached to pier 18 was designed to be stronger and stiffer than the wood fender system that had been in place at the time of the accident. The design was intended to provide better buffering of the corner that had pierced the hull of the *Julie N*.

***Casco Bay Bridge***—A new crossing of the Fore River between Portland and South Portland had been discussed since the early 1950s. In 1953, consultants conducted a study of a replacement bridge for the Cumberland County commissioners, the first of many such studies. The new bridge became a "project"[13] in 1981. A draft Environmental Impact Statement (EIS) was issued in 1986; the final EIS was issued in 1988.

Construction of the bridge was to have begun in 1991. However, because of concern for approximately 3.1 acres of wetland, the Environmental Protection Agency did not issue an environmental permit until 1991. To reduce the use of wetland, the proposed bridge span was lengthened by 900 feet to move the span leading to the bridge closer to land. Approximately 2.5 acres of wetland were saved as a result. The redesign delayed the final design of the bridge until 1992 and construction until 1993, which increased the project's cost by about $20 million.

In 1989, the Coast Guard issued a decision regarding a new bridge. Of the several alternate crossing sites considered, the "Modified Downstream Broadway (DS/B) Alternative" was selected for further project advancement to replace the Million Dollar Bridge. The new structure crosses the Fore River in a curvilinear line and incorporates a mid-level double-leaf bascule span over the navigation channel.

According to the Coast Guard decision, the bridge—

- Provides greater structural integrity than the existing bridge and reduces maintenance costs,
- Increases the efficiency of both motor vehicle and shipping operations,

[11]A bent is a structure composed of vertical, horizontal, and/or diagonal members designed to distribute an imposed load into the bottom.

[12]A dolphin is formed by driving pilings into the bottom and bundling them together with a line, normally a steel rope.

[13]MDOT designation signifying that funds and employee time would be allocated.

- Provides adequate safety for vehicular, ship, bicycle, and pedestrian traffic,
- Complements the transportation and community plan for the region, and
- Accomplishes these needs in the most cost-effective manner.

The bridge permit was issued by the Coast Guard in 1992 and called for the following dimensions of the navigational opening:

- Horizontal clearance: 196.85 feet,
- Vertical clearance: minimum 55 feet above mean high water in the closed position with the center 100 feet of the span providing a minimum 65 feet vertical clearance, and
- Unlimited vertical clearance in the open position.

Most of bascule pier 18 of the Million Dollar Bridge was removed in September 1997, although some rubble remains, and old pier 19 was removed in mid-March 1998. The new Casco Bay Bridge, which is approximately 100 feet downstream of the Million Dollar Bridge's former location, was completed and opened to highway traffic on September 1, 1997.

***Fender System for the New Bridge***—The designers of the fender system protecting the new bridge elected to use an independent steel pile-supported system and rubber fenders mounted on the bridge piers. The design also included four 60-foot-diameter steel cells filled with gravel, located upstream and downstream of each bascule pier. The independent pile-supported system prevents contact with the piers for most collisions, while the rubber fender system on the piers is designed in anticipation of more serious events, in which a vessel would penetrate and likely demolish part of the pile-supported system.

The pile-supported fender system consists of nine horizontal steel I beams (wales) attached to 36-inch-diameter steel piles spaced 9 feet apart along each pier face. The I beams are faced with protective timber strips. The fender system flares away from the channel alignment at an angle of 20° on the upstream and downstream side of each pier, passing directly in front of each of the 60-foot-diameter cells.

The pile-supported fender at each pier face was designed to absorb the energy caused by the collision of a 25,000-deadweight-ton[14] vessel moving at 5 knots at an impact angle of 7°. The substructure and piers supporting the rubber fender system are designed to absorb the energy caused by a collision with a 50,000-deadweight-ton vessel moving at 5 knots and impacting at a 15° angle.

The fenders were designed to allow for up to 13.25 feet of flare (overhang) at the bow of a vessel. Thus, the superstructure of the bridge would not be contacted unless the flare of a passing vessel exceeded 13.25 feet. Vessels can have as much as 20 feet of flare at the bow, making contact with the superstructure inevitable for such vessels.

## Crew Information

The *Julie N* was manned by a crew of 27 Korean nationals, all properly licensed or certificated by the Liberian government.

***Master***—The master, age 48, graduated from the Korean Merchant Marine Academy at Mogpo, Korea, in 1971 after a 5-year course of study in marine transportation. He had held a Korean master's license for 6 years. He also held a master's license issued by the Republic of Liberia in April 1992 and was qualified as a radar observer on oceangoing vessels of any gross tonnage. MOC records indicate that he had

[14]The *Julie N* had a deadweight tonnage (carrying capacity in long or in metric tons) of 29,994 tons.

been sailing for 17 years. He had been master of the *Julie N* for approximately 30 months and had served as master of the oceangoing ships *Canopus, Eliane, Pacific Hunter, Suzanne,* and *Allegre*. The master had attended various safety courses including Bridge Team Management, Tanker Safety and Crude Oil Washing, and a course outlining the hazards of drug and alcohol use.

***Third Mate***—The third mate, age 23, graduated from the Korean Merchant Marine Academy at Mogpo in 1995. He holds a second officer's license issued by the Republic of Liberia. He joined the MOC on March 18, 1995, and had sailed as a third officer for approximately 1½ years. The third mate had attended Bridge Team Management and other training.

***Pilot***—The pilot, age 54, has been the docking master pilot for Portland Tugboat and Ship Docking Company since September 1993. When a ship requests docking services from Portland Tugboat and Ship Docking Company, the company dispatches two of its tugboats and this pilot. Although self-employed when piloting, the pilot was still covered by Portland Tugboat and Ship Docking Company's drug testing program.

The pilot started his maritime career in 1968 as a deckhand aboard a 50-foot, 300-hp tug, the *Morania No. 4,* at a sand plant on Long Island, New York. In 1972, he obtained a license as an Operator of Uninspected Towing Vessels and became the master of the *Morania No. 4.* His duties involved towing sand scows[15] throughout New York harbor.

During the 1970s, the pilot was promoted to master of several larger tugs. At that time, he sailed upon the waters of New York Harbor-Hudson River, all of the Erie Barge Canal, the Great Lakes, and the St. Lawrence River as far as Ogdensburg, New York.

In 1980, he was transferred to the 3,600-hp tug, *Morania No. 20,* and worked as a mate for 6 months before assuming the position of master. In 1992, he served as master of the 4,200-hp tug *Morania No. 1*. While master of the *Morania No. 20* and *Morania No. 1*, he entered numerous ports along the Gulf of Mexico, the East Coast of the United States, and Puerto Rico, towing barges that ranged in size from 3,324 to 7,297 gross tons.

In late 1992, he was accepted by Portland Tugboat and Ship Docking Company as a docking master and entered an apprenticeship program that required him to ride as an observer on ships calling at Portland. Over the following 12 months, according to the pilot's records, he rode on more than 350 ships and 100 tugs and barges. During that period, he obtained an Unlimited First Class Pilot's license for Portland Harbor.

In September 1993, upon completion of his apprenticeship, he assumed the duties of full-time docking master pilot for Portland Harbor. Since that time, according to the pilot, he had piloted 1,028 vessels into and out of Portland Harbor; 655 of those vessels, ranging up to 93 feet in width, were piloted through the Million Dollar Bridge. These transits occurred during the day and the night and in all weather conditions common to the Portland area.

***Pilot's Accident History***—The pilot had been involved in two collisions with the bridge while piloting tugs and barges through it. The first accident occurred on May 2, 1986, while he was employed by Morania. He was piloting the tug *Morania No. 20*, towing barge No. 420. The barge collided with the steel of the bridge, putting the bridge out of service for 2 days for repairs costing about $60,000. The second accident occurred December 13, 1995, while he was serving as the pilot directing the movement of the tugboat *Frederick Bouchard* and barge No. 120 during an outbound transit. During the

[15]Barges used for transporting sand, garbage, and miscellaneous bulk cargo are sometimes referred to as scows.

transit, the barge collided with the fendering system of the bridge.

The pilot testified at the Safety Board's March 1997 public hearing in Portland that the December 1995 accident with the *Frederick Bouchard* occurred between 2300 and 2400. The pilot stated that after the collision with the South Portland Bridge, the barge was taken to anchorage and that he understood that the captain planned to notify the Coast Guard of the accident. The pilot said that since he had another job in about 2 ½ hours, he took a tugboat back to the dock and walked to his apartment nearby. He said that he left a message with the Coast Guard by voice mail between 0200 and 0300 that he would return home about 0800. He stated that he completed the piloting job about 0600 and returned home. He further stated that he arrived at the Coast Guard office about 0800, met with two lieutenants, and gave them his report about the *Frederick Bouchard* accident.

Although the accident was not a serious marine incident, he said that at that time the officers asked him to take a "drug test." The pilot said that he called his secretary and asked her to set up a drug test and that he reported to a local occupational health clinic in the "late morning, early afternoon" for testing. After the test, he said that he forwarded the results to the Coast Guard. He said that he was not asked by the Coast Guard to take an alcohol test. Furthermore, he said that no one specified the type of samples (blood, breath, or urine) that he was to provide. He stated that he believed that the lab technicians would know which specimens to ask for.

Following an investigation of the collision, the Coast Guard issued a letter of warning to the pilot on November 20, 1996. This warning will be considered at any future proceedings involving the pilot's Merchant Mariner's credentials.

The Safety Board is aware of two instances where the pilot refused to submit to alcohol testing in connection with traffic violations. In 1990, while living in Florida, the pilot refused to be tested for alcohol after being stopped in Boca Raton for speeding. The pilot told Safety Board investigators that he refused to be tested for alcohol in that instance because the officer who had stopped him was excessively rude. He was subsequently arrested, and his driver's license was administratively suspended. Later, the initial charges were dropped, and the police department sent the pilot a letter of apology. In 1993, the pilot was stopped in South Portland for speeding and was asked by the police to take a test for alcohol, which he declined. He was convicted of "driving to endanger" (a lesser charge than "operating under the influence"), and his driver's license was suspended for 1 month (November 16 through December 16, 1993).

***Pilot's Preaccident Activities***—According to the pilot's testimony to Safety Board investigators in October 1996, the pilot recalled sailing the *Irving Arctic* at the Mobile Terminal about midnight September 24, departing the ship about 0100 the morning of September 25. His drive home from the dock only took about 15 minutes.

On September 26 at 0630, the pilot sailed the *Panther*, a PanaMax ship at the Gulf Terminal, South Portland, ending that activity about 0700. Later, he continued his daily routine, picking up his mail and returning to his house to familiarize himself with a computer that he had just bought.

On the day of the accident, September 27, the pilot stated that he arose at 0700, his normal time. He made a pot of coffee, had a bowl of cereal, walked the dog, and then returned home to prepare for an 0800 meeting of the bridge contractors in South Portland. He attended the meeting to provide input on the new bridge construction. At the meeting, he engaged others in conversation about the new bridge and drank some orange juice. Two individuals at the meeting who were later contacted by the Safety Board stated that the pilot appeared to be rested and completely sober. He left the meeting at about 0930 to drive to BIW. There, he boarded the tugboat *Captain Bill* to take him to the *Julie N.*

## Vessel Information

The *Julie N* was registered in Liberia, owned by Amity Products Carriers, Inc., Wilmington, Delaware, and operated by MOC, New York, New York. The vessel was built by Naikai Shipbuilding and Engineering Company, Ltd., Setoda, Japan, in 1982 and classified by Lloyd's Register of Shipping, London, England.

The vessel met the construction and equipment requirements of the Safety of Life at Sea Convention (SOLAS) 74, as amended, and of the International Convention for the Prevention of Pollution from Ships, 1973, as modified by the Protocol of 1978 (MARPOL 73/78).

The vessel was of all-welded, steel construction, had a single, continuous main deck, a straight raked stem, and a bulbous bow. The deckhouse, containing the crew accommodations and the navigation bridge, was located aft over the engineroom.

Navigation bridge equipment included two radars with automatic radar plotting aid (ARPA) capability (one 3 cm and one 10 cm), depth sounder, radio direction finder, gyro compass, course recorder, global positioning system (GPS), Loran, and transit satellite navigation. The navigation equipment was examined and found to be in good working order. All charts and publications were found to be correct and up to date.

Because of the pollution cleanup efforts and containment booms around the vessel, an operational test of the vessel's steering was deferred for a few days. The Coast Guard conducted the test for the Safety Board when the booms were clear and the *Julie N's* steering was found to be satisfactory. The tests revealed that the rudder could be shifted from port 20° to hard port 35° in 6 seconds and that the rudder could be moved from hard port to hard starboard in about 28 seconds.

The principal characteristics of the *Julie N* are:

| | |
|---|---|
| Length overall | 560 feet (170.69 m) |
| Beam | 86.3 feet (26.29 m) |
| Depth | 48.9 feet (14.9 m) |
| Gross tonnage | 18,477 |
| Deadweight tonnage | 29,994 |
| Horsepower | 11,200 |

## Waterway Information

Portland Harbor is ice-free and offers secure anchorage to deep-draft vessels in all weather. It is the Atlantic terminus for pipeline shipments of petroleum products to Canada and handles considerable domestic and foreign commerce in petroleum products, wood pulp, paper, seafood products, and general cargo.

The outer harbor includes three deepwater general anchorages and the crude oil discharging berth for Portland Pipeline, which is dedicated to shipping crude oil to Canada. Diamond Island Roads, having a depth of 34 to 45 feet, is the principal deepwater anchorage in the outer harbor.

The main harbor consists of two areas: the outer part of the main harbor, which extends from the entrance of the Fore River to the Million Dollar Bridge, and the inner harbor, which extends from the Million Dollar Bridge to the head of deepwater navigation at the fixed railroad and highway bridges. Nearly all petroleum shipments entering Portland for distribution to the Northeast are received by terminals in the inner harbor. Some land and terminals are available in the inner harbor for expanded container operations.

The Federal project[16] provides for a 45-foot-deep channel from the sea to Fort George, and 35 feet in the inner harbor and Fore River to the turning basin at the head of deepwater navigation.

[16]Federal project refers to the channel width and depth that the U.S. Army Corps of Engineers must maintain through regular dredging. In recent years, environmental concerns have limited the disposal of dredging spoils; hence, some maintenance dredging is behind schedule.

The mean range of the tide for Portland Harbor is 9.1 feet. The velocity of the tidal current in the outer harbor southwest of Diamond Island Ledge is about 1 knot; within the harbor, the current is about 0.5 knot along the general axis of the harbor (southwest-northeast). At the time of the accident, the tide was 11.2 feet, about 2 feet higher than normal, resulting in a slight flood current flowing upriver through the bridge. The 11.2 feet would be added to the channel depth of 35 to 36 feet to give a channel depth of approximately 45 feet. It is customary for tankships to enter the inner harbor at high water to discharge as the tide goes out.

## Meteorological Information

At the time of the accident, the winds were light and variable, the visibility was good, and the tide was nearly high water slack. The temperature was about 60°F.

## Medical and Pathological Information

***Drug and Alcohol Testing of the Julie N's Pilot***—The master and deckhand of the tugboat *Captain Bill* and the master of the *Julie N* stated that the pilot appeared to be completely sober, alert, and well-rested.

Shortly before 1230, after the accident and after the vessel was moored at Rolling Mills Terminal and the tugs had been released and the vessel was being boomed,[17] the pilot left the ship. As the pilot proceeded down the gangway, he met the vessel's agent, who informed him that his (the pilot's) attorney was on board the tug *Captain Bill* at the end of the pier. The pilot then walked to the end of the pier and went aboard the tug to meet with his attorney.

About 1235, the pilot called the secretary at Portland Tugboat and Ship Docking Company from the tug to inform her of the accident. He requested that she call the Center for Health Promotion (CHP) and schedule a "drug" test for him. The secretary was already aware of the collision through a previous phone conversation with one of the tugboat masters assisting in moving the *Julie N*. The secretary contacted the CHP scheduling department and said that the company would like to send one of its employees "for a drug test." (The CHP receptionist stated that the tugboat company secretary requested a "random drug screen.") An appointment was made for the pilot to report to the CHP at 1415 that day for drug testing. (A CHP representative later stated that an appointment is not necessary for postaccident testing and that the CHP would have offered to conduct the testing immediately if it had been aware that the testing was related to an accident.) The secretary then informed the pilot by cellular phone of his appointment time. The secretary was accustomed to making appointments for random drug testing and was unaware that postaccident testing was different or required any additional testing.

About 1215, about 1 hour and 10 minutes after the accident occurred, the first Coast Guard officer to board the *Julie N* arrived at Rolling Mills Terminal, while the *Julie N* was being moored. About 1230, either shortly before or after boarding the vessel, the officer was handed the pilot's attorney's business card and was told that the pilot and his attorney were on board the tugboat moored nearby. At approximately 1245, the officer briefed the Coast Guard Marine Safety Office on the overall situation. At this time, he mentioned that the pilot and his attorney were not on board the *Julie N* and that he had not made contact with nor spoken to them. The officer later stated that at the time, his first concern was controlling the oil spill rather than interviewing the pilot and crew about the accident.

The attorney for the pilot later stated that he had given his card to the Coast Guard officer on the vessel soon after the vessel docked and had informed the officer that he was the pilot's attorney and that the pilot was available for an interview. The attorney stated that he informed the officer that the pilot had a 1415 appointment for testing. Later, about 1345, the attorney said he informed the Coast Guard officer that it was necessary for the pilot to leave the area to make

[17] Deployment of floating barriers to contain or prevent the movement of oil floating on the water.

his 1415 appointment. According to the attorney, the Coast Guard officer agreed that the pilot should leave for the appointment.

Shortly after 1345, the pilot's attorney drove the pilot to the CHP for his scheduled testing, arriving at approximately 1350.

Meanwhile, about 1320, the Coast Guard Marine Safety Office called the Portland Tugboat and Ship Docking Company and asked the secretary whether postaccident testing was being done for the pilot. The secretary informed the Coast Guard that an appointment for testing the pilot had been made with the CHP.

When the pilot arrived at the CHP, he checked in at the reception desk in the lobby. He identified himself, though he did not mention that he had just been involved in an accident. At the time, film footage of the accident was being shown on the television set in the lobby, and the pilot stated that he did not want to acknowledge that he was associated with the accident. There was no discussion as to the type of testing to be done, and according to the pilot, he "assumed at all times that the Center would do whatever testing was necessary, including alcohol testing." The pilot provided a picture identification card as requested by the technician and signed a "Drug /Alcohol Consent and Release Form." He then received a urine specimen cup and was requested to provide a specimen. About 1429, the pilot provided a urine specimen in the collection area, as requested by the technician, and then returned and gave the specimen to the technician. At this time, he signed a second form, which he stated he did not read at the time. This form, later determined to be the "Federal Drug Testing and Control Form," had the box for "Random" checked as the reason for the test.

The technician later stated that the pilot appeared to be sober and did not display any indication of alcohol impairment.

"Random" testing was checked by the CHP technician on the form because random testing had been ordered by the Portland Tugboat and Ship Docking Company. Random testing in the marine industry is solely for testing for the five drugs specified in U.S. Department of Transportation (DOT) and Coast Guard regulations[18] and does not include random testing for alcohol. Personnel at the CHP were unaware that the pilot had been in an accident and therefore needed to provide an additional blood or breath sample for alcohol testing to comply with the requirements of postaccident testing. The pilot stated that he did not review his copy of the form until the issue of alcohol testing surfaced in press reports a few days later.

The pilot later stated that he believed the testing would include testing for alcohol and it was his belief that urine was the only specimen needed for both alcohol and drug testing. He also stated that he was unaware that the regulations required the testing of breath or blood to determine the presence of alcohol and that urine was not tested for alcohol. When asked what could be done to inform mariners of postaccident testing requirements, the pilot responded that posting signs in the urine sample collection area would have alerted him that urine alone was insufficient and that breath or blood testing was also required. The pilot stated that he would have complied with postaccident testing regulations had he known what to do.

The principal owner of the Portland Tugboat and Ship Docking Company, the company whose drug and alcohol testing program covered the pilot, also testified that he was unaware that a urine specimen was insufficient for postaccident testing. He said he thought that the urine specimen would be used for alcohol as well as drug testing. He stated that it was only because of the press coverage following the accident about the failure to test the pilot for alcohol that he

[18]The five drugs listed in DOT regulations at 49 CFR 40.21 and the Coast Guard regulations at 46 CFR 16.350 are marijuana, cocaine, opiates, phencyclidines (PCPs), and amphetamines. Random testing in the marine industry is solely for testing for the five drugs specified in the DOT and Coast Guard regulations. Coast Guard regulations do not include random testing for alcohol; however, DOT alcohol testing regulations provide for random testing for employees in other modes of transportation.

learned breath or blood testing was required to determine alcohol use.

One split of the original urine specimen was made, and the two split samples were sent to Roche CompuChem Labs in Research Triangle Park, North Carolina, by Airborne Express at approximately 1620 on September 27.

One urine sample was subjected to the prescribed 5-panel drug screen for marijuana, cocaine, opiates, phencyclidines (PCPs), and amphetamines as required by Coast Guard regulations at 46 CFR 16 and DOT regulations at 49 CFR 40. Written, negative test results were received by the CHP on September 30, 1996. The remaining urine sample was discarded by Roche CompuChem Labs on October 4, the prescribed 5 days following negative test results.

***Drug and Alcohol Testing of the Julie N's Crew***—The MOC has a program of random testing for both alcohol and drugs on its vessels. Each vessel is equipped with breath-testing equipment for alcohol testing, and the master and deck officers are trained to use the equipment. Urine collection and shipping containers are also carried on all MOC vessels.

Since 1994, the MOC has had a contract with an independent firm, Anderson/Kelly Associates, Inc., owners of International Collection for Substance Abuse Screening (ICSAS), to provide toxicology testing of crews on MOC vessels. The contract includes the testing of pilots if they are still on board, with testing costs to be paid by the MOC.

At 1207, on the day of the accident, the MOC requested the ICSAS to test all personnel on board the *Julie N.* The ICSAS then made arrangements with the CHP in Portland to conduct the breath testing and for Comprehensive Drug Testing Services in Portland to collect urine specimens. At 1240, the ICSAS advised the MOC that technicians were en route to the vessel. About 2 ½ hours after the accident, which included a few minutes' wait on the pier, two technicians were escorted aboard the *Julie N* to start the testing, which began at 1330. The technicians elected to collect urine specimens first and conduct breath testing later. The breath testing did not commence until about 1620, more than 5 hours after the accident, and was not completed until nearly 1800. The master was among the last to be breath-tested.

About 1300, 2 hours after the accident, the Coast Guard Marine Safety Office in Portland called the MOC and informed them that "post serious marine incident testing" was required for all crewmembers involved in the incident. The MOC advised that efforts were underway to accomplish the testing.

All breath samples tested negative for alcohol, and all urine specimens tested negative for drugs.

A representative of the MOC stated that although the testing equipment was on board the *Julie N* and that the officers were trained in its use, the MOC elected to have the testing performed by its contractor. MOC policy is to have an independent testing agency conduct the testing when such an agency is readily available. According to the MOC,

> independent agencies are experienced in both sample collection and chain of custody procedures, thereby guaranteeing valid test results. Employment of an independent agency also avoids any question of the propriety of self-testing.

However, the MOC stated that if circumstances preclude prompt independent testing, the breath-testing devices and urine collection kits carried on board would be employed by vessel personnel trained in their use.

The MOC also prefers using independent agencies for postaccident testing because "it avoids removing vessel personnel from critical postaccident duties for the considerable time required to complete the testing process." The MOC pointed out that the *Julie N*'s officers were "totally engaged in stabilizing the vessel's

condition and seeking to minimize the outflow of oil" following the accident.

***Accidents Involving Postaccident Testing Issues***—The Safety Board has investigated a number of accidents where postaccident testing for alcohol and other drugs was not conducted properly. In many marine accidents investigated by the Safety Board, considerable time was required to collect breath or blood for alcohol testing or samples were never collected, as illustrated in table 1.

In some cases, marine employers failed to conduct postaccident testing because of their lack of understanding of the testing requirements set forth in Coast Guard regulations. For instance, the pilot of the *Julie N* and his tugboat company reportedly believed that urine was the sole specimen required and that it was tested for alcohol as well as drugs. In many instances, the Coast Guard had to initiate the postaccident testing process through informing or reminding the marine employer that the responsibility for testing resides with the employer and by providing information about how and where to obtain the services of a testing firm and or how to obtain the needed equipment.

Postaccident drinking can affect sample results and has been a factor in some accidents. In one case involving an explosion and fire on a tankship[19] that had been undergoing welding repairs, it was necessary for the crew to abandon the vessel. Upon arrival ashore, some crewmembers began consuming alcohol at a local bar. No regulation currently prohibits postaccident drinking. In this accident, it was also necessary for the Coast Guard to explain to the marine employer's representative that testing is the responsibility of the marine employer and to provide information about obtaining the services of a testing agency.

Other investigations have been impeded because crewmembers or pilots were not available for testing, such as in the *Jupiter/Buffalo* accident, in which many crewmembers had gone ashore without being tested. On one occasion, most of the crew of an oceangoing ship was transported out of the country and consequently never available to investigators.[20] (For more information on the *Jupiter/Buffalo* accident and other accidents involving postaccident testing issues, see table 1.)

## Postaccident Testing Regulations and Programs

***Coast Guard Regulations***—Coast Guard regulations governing postaccident testing for alcohol and "dangerous drugs"[21] (marijuana, cocaine, opiates, phencyclidines (PCPs); and amphetamines) are found at 33 CFR 95 (*Operating a Vessel While Intoxicated*) and 46 CFR 4.06 (*Mandatory Chemical Testing Following Serious Marine Incidents Involving Vessels in Commercial Service*). Regulations for testing for dangerous drugs in the workplace for personnel on board U.S. commercial vessels are at 46 CFR 16. (See appendix B for these regulations.)

[19] *Marine Accident Report—Investigation of the Explosion and Fire on Board the U.S. Tankship* Omi Charger *at Galveston, Texas, on October 9, 1993* (NTSB/MAR-94/04).

[20] *Marine Accident Report—Investigation of the Fire on Board the Cypriot Bulk Carrier* Protector Alpha *at Kalama, Washington, on February 14, 1982* (NTSB-MAR-83-01).

[21] The term "dangerous drug" is used in the report to be consistent with terminology used in Coast Guard regulations at 46 CFR 4.06 and 46 CFR 16. The basis for the term "dangerous drug" is found at 46 U.S.C. 7702 (c)(2), which states: "...The Secretary shall require the testing of the holder of a license, certificate of registry, or merchant mariner's document for use of alcohol and dangerous drugs in violation of law or Federal regulations. The testing may include preemployment (with respect to dangerous drugs only), periodic, random, reasonable cause, and postaccident testing." In some parts of this report, the word "drug" may be used for brevity and means these five drugs.

**Table 1—Time elapsed before postaccident testing performed and types of testing performed after major marine accidents investigated by the Safety Board**

| Vessel | Breath/blood testing (hours) | Urine testing (hours) | Remarks |
|---|---|---|---|
| *Exxon Valdez*<br>March 24, 1989 | —/10.5 | 10.5 | ▪ Testing delayed because of time necessary Coast Guard investigators to arrive at the scene and the several hours it took to locate a collector.<br>▪ Alcohol was a causal factor. |
| *World Prodigy*<br>June 23, 1989 | —/22 | 22 | None. |
| *Aleutian Enterprise*<br>March 22, 1990 | —/— | 42 | ▪ Remote location. Lack of knowledge by the marine employer about postaccident testing. Urine specimen from master tested negative. |
| *Shinousa/*<br>*Chandy N*<br>*Hellespont Faith*<br>July 28, 1990 | —/— | 8 | ▪ Coast Guard investigators on board soon after accident to interview crews observed no evidence of intoxication or drug use. Pilot of *Shinousa* gave urine specimen in about 8 hours. All other urine collected over 24 hours later. |
| *Mandan*<br>August 15, 1990 | 5.5/— | 5.5 | ▪ Pilot and master tested.<br>▪ Test results were negative for alcohol and drugs. |
| *Jupiter/Buffalo*<br>September 16, 1990 | —/— | Unknown/9.5 | ▪ Coast Guard investigators reminded *Buffalo* of need for alcohol and drug testing about 6 hours after accident. Some crewmembers had gone ashore already; thus, no alcohol testing attempted of *Buffalo* crew. No one thought to test *Jupiter* injured that were hospitalized. Deceased *Jupiter* crewman tested negative for drugs. |
| *Sea King*<br>January 11, 1991 | —/— | — | ▪ Owner refused to test. Lack of authority at time to impose penalty against the owner for failure to test. Master rescued by Coast Guard soon after accident.<br>▪ Unknown whether alcohol or drugs involved. |
| *Queen Elizabeth* 2<br>August 7, 1992 | —/39 | 16–39 | ▪ Remote location. Marine employer's instructions were to cooperate with Coast Guard in postaccident testing.<br>▪ Test results were negative for drugs. |
| *Fremont/*<br>*Juraj Dalmatinac*<br>December 21, 1992 | —/—<br>—/— | 18<br>14–16 | None. |

| Vessel | Breath/blood testing (hours) | Urine testing (hours) | Remarks |
|---|---|---|---|
| *Chris*<br>May 28, 1993 | —/7–7.5 | 7–7.5 | ▪ Coast Guard on scene a few minutes after the accident. |
| *Yorktown Clipper*<br>August 18, 1993 | —/— | 18.5 | ▪ Remote location. |
| *Mauvilla*<br>September 22, 1993 | —/— | 8 | ▪ Remote location. |
| *Omi Charger*<br>October 9, 1993 | —/— | 5–18 | ▪ Postaccident drinking. Lack of knowledge by marine employer. Testing initiated by Coast Guard by informing marine employer of need for testing and how to obtain testing assistance. |
| *Noordam/*<br>*Mount Ymitos*<br>November 6, 1993 | 7/—<br>Yes/— | 7–26<br>29–30 | ▪ No authority to conduct testing of foreign vessels in international waters. However, watchstanders volunteered for testing. |
| *El Toro*<br>December 5, 1993 | —/3–6 | — | ▪ Test results were negative for alcohol and drugs. |
| *All Alaskan*<br>July 24, 1994 | —/— | 28 | ▪ Master not tested. Master boarded Coast Guard cutter about 3 hours after fire started but was not tested during the 3 days on board. Health clinic closed; thus, urine collection of crew delayed until next day. |
| *Seal Island*<br>October 8, 1994 | —/— | — | ▪ In port at St. Croix, Virgin Islands. Lack of knowledge by the marine employer of testing requirements. |
| *Alaska Spirit*<br>May 27, 1995 | —/Postmortem | Not applicable | None. |
| *Royal Majesty*<br>June 10, 1995 | —/25–28 | 25–28 | ▪ No authority to conduct testing of foreign vessel in international waters. Remote location. Crew volunteered to be tested. |
| *Star Princess*<br>June 23, 1995 | Pilot 4/—<br>Crew 8.5/— | 4<br>8.5 | ▪ Test results were negative for alcohol and drugs (pilot). |
| *Scandia*<br>January 19, 1996 | 9/— | 15.7 | ▪ Remote location. Crew fighting fire and attempting to salvage barge. Coast Guard performed breath testing of crew for alcohol.<br>▪ Test results were negative for alcohol and drugs. |
| *Universe Explorer*<br>July 27, 1996 | —/— | 34 | None. |

| Vessel | Breath/blood testing (hours) | Urine testing (hours) | Remarks |
|---|---|---|---|
| *Julie N*<br>September 27, 1996 | Pilot —/—<br>Crew 3–7/— | 3<br>3–7 | ▪ Lack of knowledge by the marine employer.<br>▪ Test results of pilot were negative for drugs.<br>▪ Breath testing of *Julie N* crew delayed by technicians who elected to collect urine specimens first.<br>▪ Test results were negative for alcohol and drugs. |
| *Dave Blackburn*<br>October 23, 1996 | 9/— | 9 | None. |
| *Sundowner*<br>December 7, 1996 | —/16–17 | 16–17 | ▪ No breath testing conducted because owner reported to Coast Guard that he had permitted the crew to engage in postaccident drinking. Testing consortium under contract not open after hours and on weekends, thus delaying specimen collection.<br>▪ Unknown whether alcohol or drugs involved. |
| *Bright Field*<br>December 7, 1996 | Pilot 1.5/—<br>Crew 6.5–8.5/— | 1.5<br>6.5–8.5 | ▪ Coast Guard on board soon after accident; reminded owner of need for testing. Directly involved personnel were tested last.<br>▪ Test results were negative for alcohol and drugs. |
| *Cowslip/ Evergrade*<br>May 14, 1997 | *Cowslip* —/8.6–10<br>Pilot —/—<br>*Evergrade* —/17.5–18.5 | 8.6–10<br>12.7<br>17.5–18.5 | ▪ *Cowslip* is a Coast Guard cutter. |
| *Alaska 1/ Hanjin Barcelona*<br>February 11, 1998 | 6/—<br>—/— | 6<br>— | ▪ Saliva collected instead of breath for alcohol testing.<br>▪ No authority to test crew of *Hanjin Barcelona* because ship was a foreign vessel in international waters.<br>▪ Unknown whether alcohol or drugs involved. |

As shown in table 2, 33 CFR 95 applies to all U.S. vessels (recreational and commercial) and to all foreign vessels (recreational and commercial) on the navigable waters of the United States. The applicability to foreign vessels is clearly stated at 33 CFR 95. Also, these regulations apply to U.S. vessels on international waters.

The regulations at 33 CFR 95 establish specific thresholds for alcohol intoxication: .04 percent blood alcohol concentration (BAC) for operators of commercial vessels and .10 percent BAC for operators of recreational vessels. In addition, 33 CFR 95 recognizes the following as evidence of intoxication: "(a) Personal observation of an individual's manner, disposition, speech, muscular movement, general appearance or behavior, or (b) A chemical test." Under 33 CFR 95, a law enforcement officer (including Coast Guard officers, warrant officers, or petty officers) or a marine employer may direct an individual to undergo the tests noted in table 2 when "reasonable cause" exists. Reasonable cause, according to 33 CFR 95, exists when the individual is directly involved in a marine accident meeting the criteria of Chapter 61 of Title 46, *United States Code* (46 U.S.C. 6101) (see table 2), or when the individual is suspected of being intoxicated.

The regulations at 33 CFR 95 formerly specified punitive measures against a marine employee for being intoxicated when operating a vessel[22] but do not specify sanctions against the individual who fails or refuses to be tested or against the marine employer that fails to require crewmember testing. However, 33 CFR 95.040 does provide that if an individual refuses to submit or cooperate in the administration of timely testing when directed by a law enforcement officer based on reasonable cause, the individual shall be assumed to be intoxicated. Further, if the test is directed by the marine employer, then an individual's refusal is admissible as evidence in an administrative proceeding, which could result in the revocation or suspension of the license, certification, or document held by a U.S. seaman or the imposition of a civil penalty. The lack of authority to prescribe a penalty against the marine employer that fails to conduct testing was corrected in late 1996 by the Coast Guard Authorization Act of 1997 (46 U.S.C. 2115):

> *Civil penalty to enforce alcohol and dangerous drug testing*
>
> Any person who fails to implement or conduct, or who otherwise fails to comply with the requirements prescribed by the Secretary for chemical testing for dangerous drugs or for evidence of alcohol use, as prescribed under this subtitle or a regulation prescribed by the Secretary to carry out the provisions of this subtitle, is liable to the United States Government for a civil penalty of not more than $1,000 for each violation. Each day of a continuing violation shall constitute a separate violation.

As noted in table 2, 46 CFR 4.06 applies to U.S. commercial vessels and to foreign commercial vessels on U.S. waters. U.S. commercial vessels include uninspected commercial vessels, such as most fishing and towing vessels, as well as inspected vessels.

The regulations at 46 CFR 4.06-1 require the marine employer owning or operating a vessel involved in a serious marine incident as defined in table 2 to "take all practicable steps to have each individual engaged or employed on board the vessel who is directly involved in the incident chemically tested for evidence of drug and alcohol use." A law enforcement officer may determine that additional individuals are directly involved in the serious marine incident. In such cases, 46 CFR 4.06-1 requires the marine employer to take all practicable steps to have these individuals submit urine specimens and breath or blood specimens or both breath and blood specimens for chemical testing. In other words, testing for alcohol as well as for drugs is

[22]The punitive measures formerly at 33 CFR 95.055 have been removed from the 1997 *Code of Federal Regulations.*

**Table 2—Coast Guard regulations governing postaccident testing**

| | 33 CFR 95 | 46 CFR 4.06 |
|---|---|---|
| Applicability | ▪ Commercial vessels–U.S. and foreign flag<br>▪ Recreational vessels–U.S. and foreign flag | ▪ U.S. commercial vessels<br>▪ Foreign-flag commercial vessels on U.S. waters |
| Intoxication standards for alcohol | ▪ Commercial vessels–.04 percent blood alcohol concentration (BAC)<br>▪ Recreational vessels–.10 percent BAC or State Standard | None |
| Testing samples | General—<br>▪ Breath<br>▪ Blood<br>▪ Urine<br>▪ Saliva or other bodily fluids or tissues | ▪ Urine<br>▪ Breath or blood or both |
| Criteria for testing | Accident meeting the criteria of 46 U.S.C. 6101:<br><br>▪ Death or serious injury to individual<br>▪ Material loss of property<br>▪ Material damage affecting seaworthiness or efficiency of vessel<br>▪ Significant harm to the environment<br>-OR-<br>Individual suspected of being intoxicated | Accident meeting the "serious marine incident" criteria of 46 CFR 4.03-2:<br>▪ One or more deaths<br>▪ Injury to passenger or crewmember requiring medical treatment beyond first aid or injury rendering crewmember unfit for routine vessel duties<br>▪ Property damage exceeding $100,000<br>▪ Loss of inspected vessel<br>▪ Loss of self-propelled vessel of 100 gross tons<br>▪ Discharge of 10,000 gallons of oil into navigable waters of the United States or reportable quantity of hazardous substance into navigable waters or atmosphere of the United States. |
| Penalties for refusal to test* | Suspension or revocation of employee's license; none against marine employer | Suspension or revocation of employee's license; none against marine employer |
| Testing responsibility and timeliness | Marine employer—as soon as practical | Marine employer—as soon as practical |
| Postaccident drinking | No prohibition | No prohibition |
| Testing equipment required | Not specified | ▪ Breath testing devices (oceangoing vessels)<br>▪ Urine specimen collection and shipping kits (only required on board if not obtainable in 24 hours) |
| *The Coast Guard received authority in late 1996, after the *Julie N* accident, to impose civil penalties on marine employers or anyone else failing to comply with the regulations for postaccident testing. | | |

required when a serious marine incident occurs under the jurisdiction of 46 CFR 4.06. Title 46 CFR 4.06 does not specify intoxication standards in terms of BAC.

Unlike 33 CFR 95, the regulations at 46 CFR 4.06-1 require U.S.-inspected vessels certified for unrestricted ocean routes and inspected vessels certified for restricted overseas routes to carry breath-testing devices that are capable of determining the presence of alcohol in a person's system. Also, U.S. vessels are required to carry urine specimen collection and shipping kits, unless such kits can be obtained within 24 hours of the serious marine incident. Neither 46 CFR 4.06 nor 33 CFR 95 specifies for what substances urine is to be tested. However, 46 CFR 4.06-1 does reference drugs detected by urinalysis cited at 46 CFR 4.06-50, a section of the regulations relating to duties of the medical review officer, and also references 46 CFR 16, which covers workplace testing and urine specimen collection and handling procedures for personnel on commercial vessels. (See appendix B.)

An employee's refusal to provide specimens is considered a violation of 46 CFR 4.06-1 and could subject a mariner [on a U.S. vessel] to suspension and revocation procedures against the mariner's Coast-Guard issued license, certificate, or document for service on board a commercial vessel. Also, such an individual can be removed from duties directly affecting the safety of a vessel's navigation or operations. The regulations at 46 CFR 4.06-1 do not list sanctions or punitive actions for marine employers that fail to comply with the regulations or for foreign vessel employees or state-licensed pilots who refuse to provide the required specimens for testing. However, as noted earlier in this section, the 1997 Coast Guard Authorization Act provides authority for the Coast Guard to impose civil penalties on anyone failing to comply with the requirements for postaccident testing.

***Omnibus Transportation Employee Testing Act of 1991***—Because of its concerns about the time sensitivity of toxicological sampling, in 1989, the Safety Board recommended[23] to the DOT that both blood and urine samples be collected within 4 hours of a transportation accident. Subsequent Congressional concern about the possible use of alcohol by transportation workers resulted in the passage of the Omnibus Transportation Employee Testing Act of 1991 (the Act). The Act addresses transportation workers in the industries regulated by the DOT's operating administrations: the Federal Aviation Administration (FAA), Federal Highway Administration (FHWA), Federal Railroad Administration (FRA), and Federal Transit Administration (FTA).

The Act does not address the marine industry or the Coast Guard. At the time the Act became effective, the Coast Guard already had regulations[24] on alcohol misuse, including mandatory postaccident alcohol testing. The pipeline industry and its regulatory administration, the Research and Special Programs Administration (RSPA), were also excluded from the Act because it was reasoned that pipeline safety risks differ somewhat from risks experienced by forms of public transportation that carry people.

On February 15, 1994, the DOT operating administrations issued rules to implement the Act. At the same time, RSPA joined the other DOT operating administrations in issuing regulations to implement limited programs to prevent alcohol misuse by pipeline industry employees who perform safety-sensitive functions.

The rules implementing the Act establish priority provisions for postaccident alcohol testing.

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[23]Safety Recommendation I-89-006 was issued in a December 5, 1989, letter to the DOT and was classified "Closed—Unacceptable Action," on May 15, 1995.

[24]Regulations at 33 CFR 95, 46 CFR 4.06, and 46 CFR 16.

The common preamble[25] to the rules of all five operating administrations states that:

> as soon as practicable during the 8 hours following an accident, each employer shall test each surviving covered employee for alcohol, if that employee's performance of a safety sensitive function either contributed to an accident or cannot be discounted as a contributing factor to the accident.

The preamble also establishes the requirement to justify in writing testing delays of over 2 hours (4 hours in FRA regulations) and to cease attempts to test after 8 hours. Further, the preamble states, "After eight (8) hours have passed, the employer then shall cease attempts to administer the test and record why the employer was unable to administer a test." The preamble notes that after 8 hours, "...there is little likelihood of finding a meaningful alcohol concentration resulting from use preceding the accident."

Current Coast Guard regulations do not conform to the 1989 recommendation by the Safety Board to collect blood and urine samples within 4 hours or to the DOT's requirement to collect blood or breath samples for alcohol testing within 2 hours. Both Coast Guard regulations addressing postaccident sampling (33 CFR 95 and 46 CFR 4.06) call for testing "as soon as practicable," rather than requiring specific sampling times.

The regulations for the other DOT administrations implementing the Act also mandate random testing for alcohol, make it illegal to assume duty in safety-sensitive positions unless the BAC is below .02 percent, and require an individual involved in an accident to refrain from consuming alcohol for 8 hours. None of these provisions are contained in Coast Guard regulations. Regarding the provision on fitness to assume duty, the DOT selected the .02 level rather than .00, "because it represents the lowest level at which a scientifically accurate alcohol concentration" could "be measured given the limitations of [then] any current technology (e.g., blood, breath)."[26]

***Coast Guard Actions on Postaccident Testing***—Coast Guard officers, warrant officers, and petty officers assigned to the merchant marine safety program receive training in alcohol and drug testing regulations during the Coast Guard's 2-week accident investigation course (120 to 144 students trained per year). The curriculum includes 1.5 hours devoted to the requirements for alcohol and drug testing, and each student receives a handout containing a detailed discussion of the drug and alcohol testing regulations.

On November 15, 1994, the Coast Guard issued ALDIST 179/94 (COMDTNOTE 16722),[27] which provided additional guidance for postaccident testing. This directive stressed the importance of timeliness in postaccident testing for alcohol and other drugs and that the timeliness of alcohol testing is especially

[25] *Federal Register*, Vol. 59, No.31, February 15, 1994, pp. 7302–7338.

[26] *Federal Register*, Vol. 59, No. 31, February 15, 1994, p. 7319.

[27] An ALDIST (short for All Districts) is a message to all Coast Guard activities and personnel that transmits information or guidance. A COMDTNOTE (short for Commandant Notice) provides information or guidance to Coast Guard activities and personnel. A COMDTNOTE normally applies for a specified time and may be disseminated by an ALDIST when rapid transmission is warranted. The ALDIST resulted from the Safety Board investigation of the grounding of the *RMS Queen Elizabeth 2* and resulting Safety Recommendation M-93-24, that the Coast Guard provide guidelines to Coast Guard boarding officers about informing marine employers of the employer's responsibility to conduct toxicological testing as soon as practicable and about providing assistance to the marine employer when necessary. Safety Recommendation M-93-24 was superseded by Safety Recommendation M-94-11, issued as a result of the Safety Board investigation of the collision of the U.S. Towboat *Chris* with the Judge Seeber Bridge in New Orleans, Louisiana. When ALDIST 179/94 was issued, Safety Recommendation M-94-11 was classified "Closed—Acceptable Action." For more information see *Marine Accident Report—Grounding of the* RMS Queen Elizabeth 2, *Vineyard Sound, Massachusetts, August 7, 1992* (NTSB/MAR-93/01) and *Highway Accident Report—Collision of the U.S. Towboat* Chris *With the Judge Seeber Bridge in New Orleans, Louisiana, May 28, 1993* (NTSB/HAR-94/03).

important because alcohol is eliminated rapidly from the body.[28]

ALDIST 179/94 requires Coast Guard investigators to alert marine employers of "their responsibility" for postaccident testing. The directive clearly states that Coast Guard personnel shall not provide urine collection material or perform as collection site personnel. The directive does allow appropriately qualified Coast Guard personnel or other local law enforcement personnel to conduct breath testing for alcohol if such testing would be more timely than the testing arranged by the marine employer or if there is any concern that testing would not otherwise be accomplished.

***Drug and Alcohol Program Inspector***—In 1995, the Coast Guard created the Drug and Alcohol Program Inspector (DAPI) program to educate U.S. commercial vessel owners and operators and pilot associations about the Coast Guard's drug testing program requirements (preemployment, periodic, random, serious marine incident, and reasonable cause testing) and related recordkeeping and reporting.

The program is now staffed by 11 inspectors, 1 for each Coast Guard District and 1 at Coast Guard headquarters. Currently, all are commissioned officers. The DAPIs visit companies to review records and explain the regulations. Discrepancies noted are normally provided to the operator in writing and followed up as necessary to ensure that compliance is carried out. One function of the DAPI is to assist small operators in joining together to participate in a consortium.[29] The DAPIs also inspect testing clinics where specimens are taken to ensure such activities meet Coast Guard criteria.

While the DAPIs are primarily concerned with informing U.S. operating companies about their drug testing responsibilities under the regulations, they are available to provide technical advice on the Coast Guard drug and alcohol testing regulations to other Coast Guard personnel, and to respond to any inquiries from the public, including foreign operators whose vessels call at U.S. ports.

***Marine Safety Office, Portland, Maine***—Additional guidance on drug and alcohol testing following a serious marine incident for Coast Guard investigating officers and field office personnel of the Portland, Maine, Inspection Zone/Captain of the Port Zone (COTP),[30] can be found in Commanding Officer Instruction 16722.2. (See appendix C.) The instruction summarizes postaccident testing requirements and provides necessary information for marine employers, such as contact information for postaccident testing firms and for Coast Guard stations in the COTP Portland area.

***Coast Guard Enforcement of Intoxication Regulations***—The Coast Guard's "Boating While Intoxicated" (BWI) program was established in 1989 to curb operation of recreational vessels by intoxicated

[28]Alcohol is eliminated quickly from the body at an average rate of about .015 to .018 percent by weight per hour. In an 8-hour period, as much as .12 to .14 percent can be eliminated from the bloodstream. Cocaine is eliminated very quickly from the blood (in as little as 2 hours), although metabolites of the drug remain in the body much longer. Many other drugs, including over-the-counter and prescription medications, are eliminated much more slowly; a number of drugs with central nervous system effects can be detected in the blood and urine for days or weeks following ingestion.

[29]A consortium is usually formed by an independent firm that will contract with vessel owners or operators to conduct the testing required by Coast Guard regulations (46 CFR 16 and 46 CFR 4.06) and to perform other services required by the regulations, including acquiring the services of a certified laboratory to perform the testing and of a medical review officer to review test results. For random testing, a consortium combines the marine employees of all vessel owners or operators into a single group or pool.

[30]Coastal area from the Massachusetts-New Hampshire border to the Canadian border (see 33 CFR 3.05-15).

individuals. In June 1991, the program became Coast Guard-wide. The BWI program's enforcement objectives are to:

- Ensure an intoxicated operator does not operate a vessel, in order to reduce the threat of harm to self and to others, and
- Educate the recreational boating public regarding existing BWI regulations and safe boating requirements.

Boarding officers involved in the program must undergo an 8-hour training course that includes instruction in calibrating and using the ALCO Sensor III breath-testing device and in administering a field sobriety test. Boarding officers must repeat this training every 2 years. Boarding officers are authorized to direct recreational boaters to submit to a field sobriety test or breath test or both when "reasonable suspicion" of operator intoxication exists or when an accident meeting the criteria of 46 U.S.C. 61 has occurred. Boarding officers work closely with State law enforcement agencies and personnel. If a State has an established intoxication level, boarding officers will test individuals for exceeding the State-established level rather than the .10 percent BAC standard contained in 33 CFR 95.

***Board of Harbor Commissioners Testing Program***—Following the *Julie N* accident, the Board of Harbor Commissioners for the Harbor of Portland established a drug and alcohol testing program for State-licensed bar pilots and the State-licensed docking masters serving Portland harbor. (See appendix D.) The drug testing portion of the program is modeled on Coast Guard regulations and includes preemployment, random, and postaccident testing for drugs. The drug testing programs, consistent with Coast Guard regulations, targets the five drugs listed in 49 CFR 40 and 46 CFR 16.350. The Harbor Commissioners' program allows testing for other drugs that may be causal factors in an accident. The alcohol testing program specifies that breath testing will be used to test for alcohol. In addition to postaccident testing for alcohol, the program also establishes a procedure for random testing for alcohol, which exceeds Coast Guard requirements. This program became effective in December 1996.

## Tests and Research

On November 7, 1996, Safety Board investigators rode the Bermudan-flag tankship *Kiowa* on an inbound transit of the bridge under similar conditions to the transit of the *Julie N.* The *Kiowa*, owned by the Koch Oil Company of Wichita, Kansas, was nearly the same length, breadth, and tonnage as the *Julie N.* The pilot on board had approximately 30 years of experience as a docking master in Portland Harbor and stated that he had never damaged the bridge. The pilot conned the vessel along the starboard side of the channel at slow ahead from a position on the outside of the starboard bridge wing. He explained that this location enabled him to best estimate the distance between the starboard side of the vessel and the fender system. At about 1½ ships' lengths from the bridge, the pilot used port 5° of rudder to move the vessel slightly to the left, and at about one ship's length, he ordered the rudder to starboard 5° to place the vessel on a very slight angle of a few degrees toward the right fender system. The pilot had previously explained that approaching the fender system at a slight angle enabled the vessel to be cushioned by the water between the bow and bridge pier. Once in the bridge drawspan, there was approximately 2 feet of clearance between the starboard side of vessel and the fender system. As the vessel passed through the drawspan, the pilot used starboard 5° to 10° of rudder to compensate for the cushioning effect between the forward starboard side of the vessel and the bridge pier. When the vessel's bridge, which was located aft over the engineroom, entered the bridge drawspan, the pilot ordered hard starboard rudder and full ahead to start the vessel turning right as soon as it exited the drawspan.

## Other Information

***Pilot's Description of His Actions***—The pilot made the following statements regarding his actions:

> I proceeded down past the State Pier at a dead slow, giving different rudder commands, picking out the ranges that I normally steer on. There was nothing wrong with that ship. She handled very well. Came down to Vessel Services. I made another correction. Came down to Deake's Wharf, which is approximately 1,000 feet from the bridge, and the ship is now committed. I bring the ship out towards the South Portland side and felt that I was a little too far to starboard, whether it was just the last of the flood current that was on my port quarter, and everything seemed to be fine. The ship was handling fine. I had asked for port rudder to get over a little more to the left. I asked for port 5, port 10, and at port 20 she started to swing, which I wanted her to. I wanted her to come onto the center line.... Not only did I have to concern myself about getting the hull through the bridge, but I was more thinking about the antennas because we had just had a problem here in December of last year with the *Overseas New Orleans*. The Portland side of the bridge came down, and there was—took the bridge wing off the *Overseas New Orleans*. So with that in mind, I picked the middle of the channel, and when I felt I was in the shape that I wanted to be, I wanted to come hard to starboard, half ahead. It came out hard to port. When the captain repeated hard to port, it took me I don't know how long, I said to myself, 'I don't want that.' Then I realized...calling for 'port, port, port, port,' I said 'hard to port' instead of 'hard to starboard.'

***Human Error***—In the past, accidents involving human error[31] were determined to have been caused by human error, with their explanation simply left at that. Today, much more can be said about how humans make errors. To learn about this behavior, researchers have found it necessary to agree upon a definition of human error and to classify the types of human error that occur based upon analysis of factors related to human error in accidents. Once an error has been categorized, countermeasures based upon what is known about that type of error can be suggested to reduce the likelihood of its reoccurring.

One example of a type of human error is a "slip," which is defined as an action not in accord with the actor's intention, the result of a good plan but a poor execution.[32]

Reason's and Mycielska's research (1982)[33] addressing commonly experienced errors and mental lapses helps to clarify what is known about the nature of slips:

> Slips occur during the largely automatic execution of some well-established or routine sequence of actions; that is, one in which the demands upon continuous attention for moment-to-moment control are relatively small.
>
> Slips appear to be associated with distraction or preoccupation. Or more precisely, they seem likely to occur when the limited attentional resource[34] is

[31]"An error occurs when a planned action fails to achieve its desired consequences." From Reason, James, and Mycielska, Klara, *Absent-Minded? The Psychology of Mental Lapses and Everyday Errors,* Prentice-Hall, Englewood Cliffs, New Jersey, p. 12.

[32]Senders, John, and Moray, Neville, *Human Error: Cause, Prediction, and Reduction*, Lawrence Erlbaum Associates, Publishers, Hillsdale, New Jersey, 1982, p. 27.

[33]Reason and Mycielska , p. 21.

[34]According to Christopher Wickens' book on human performance, "Emphasis on the quantitative properties of attention owes much to an important paper published by [Neville] Moray in 1967. Moray proposed that attention is like the limited processing capacity of a general-purpose computer. This capacity could be allocated in graded amounts to various activities depending on their difficulty or demand for that capacity. The capacity concept emphasizes both the flexible and the sharable nature of attention or processing resources. Tasks demand more of these hypothetical resources (attention or mental effort) as they become more difficult or their desired level of performance increases. With fewer resources available for other tasks, performance will deteriorate." For more information, see Wickens, Christopher D., *Engineering*

> allocated to some external or internal matter that is unrelated to the ongoing activity.
>
> Absent-mindedness appears to flourish in relatively familiar environments where there are few departures from the expected, and hence requires little in the way of outward vigilance.

Reason's and Mycielska's conclusions about human error yield general guidance for trying to understand the nature of the pilot's error, although it is difficult to correlate their conclusions about slips perfectly with the circumstances and events of the *Julie N* accident.

***Port Safety***—In 1990, the COTP established a Port Safety Forum consisting of pilots, vessel operators, shipping agents, terminal operators, environmentalists, oil spill response companies, and others having an interest in port safety, to consider how to avoid oil spills and how to respond in the event of a spill. The MDOT, which owns and is responsible for the Portland bridges, has not been a member of the Forum. The first meeting of the Forum was on June 18, 1990. The chairman was the COTP and the vice chairman was from the Office of Spill Response in the Maine Department of Environmental Protection. Soon the Forum started to explore other safety issues besides oil spill prevention and response. In some cases, advisory guidance, known as port safety protocols, were prepared once consensus had been achieved. Safety issues addressed by the Forum have included visibility requirements for vessel movements in the harbor and through the bridge, vessel moorings, under-keel clearance, tug and barge operations, abandoned vessel derelicts, maintenance dredging, heavy weather checklists for terminals, and pilot fatigue. During construction of the new bridge, Forum members met weekly with the contractors building the bridge to coordinate vessel transits with critical construction phases that limited or prevented vessel movements to ensure that petroleum stocks were sufficient to last through the closure periods.

***Million Dollar Bridge's Navigational Opening Dimensions***—The minimum horizontal clearance between the fender faces of piers 18 (South Portland side) and 19 (north, or Portland, side) was 98.24 feet (measured by MDOT after the accident). In Bridges Over the Navigable Waters of the United States, a Coast Guard publication, the horizontal clearance is listed as 100 feet.

MDOT correspondence, dated June 6, 1985, lists the horizontal clearance as 96 feet +/-; a diagram prepared by the MDOT, dated November 19, 1985, indicates a horizontal clearance of 99.6 feet; and an internal MDOT memo, dated January 1991, suggests that 96 feet be used because of the many irregularities in the fender system. The pilot of the *Julie N* and a bridge tender on duty at the time of the accident stated that the horizontal clearance was 96 feet.

Because the bascule leafs in the fully open position overhang the channel, vertical clearance was limited for approximately 5 feet horizontally from each fender system. Thus, unlimited vertical clearance was confined to the central portion of the bridge span. According to a 1985 MDOT survey, there was a 5-foot overhang at pier 19 and a 3.9-foot overhang at pier 18, making unlimited vertical clearance available throughout approximately 90 feet of the central portion of the drawspan. This number differed depending on the reference. The *Julie N* pilot stated that unlimited vertical clearance was available for 85 feet of the channel width, which was also the width indicated on a August 11, 1985, MDOT sketch and endorsed in a January 1991 memo.

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*Psychology and Human Performance,* 2nd. ed., HarperCollins Publishers, Inc., New York, New York, 1992, p. 366.

# ANALYSIS

## General

The pilot and members of the bridge watch were found by the Safety Board to be trained, experienced, and qualified to operate the *Julie N*.

The pilot of the *Julie N* was well-rested and the crew of the ship responded correctly to his commands; therefore, the Safety Board did not find fatigue or pilot-crew interaction to be factors in this accident. Also, all equipment on the vessel was operating satisfactorily, and the pilot testified to the good handling characteristics of the vessel. At the time of the accident, visibility was good, winds were light, and there was only a slight following current, which the pilot preferred.

Results of alcohol breath tests for the crew of the *Julie N* and results of drug testing performed on urine samples provided by the pilot and the crew were negative. Because the pilot was not tested, the Safety Board concludes that it cannot conclusively eliminate alcohol use as a causal factor in this accident. However, the statements of personnel closely associated with the pilot support that alcohol was not a factor affecting the pilot's performance. Accordingly, the Safety Board concludes that the human factors of fatigue, training, drug use, and pilot-crew interaction were not causal or contributing factors in the accident.

## The Accident

***Maneuver by the Pilot***—The pilot stated that because of his concern that the bascule leaf might make contact with the vessel's starboard antenna, he had elected to maneuver the vessel to pass through the center of the drawspan rather than pass very close to the north fender system, his normal method of transiting the bridge. The pilot had issued three consecutive orders for port rudder to swing the vessel to the left. The pilot would most likely have altered the vessel's heading to the left even if he had intended to pass close to the north fender system, since it was customary to swing the bow first away and then back toward the north fender system and take advantage of a cushioning effect of the displacement of the water between the north pier and the forward, starboard side of the vessel. The pilot's intended maneuver would have resulted in the vessel being only about 5 or 6 feet farther to the left than usual.

The pilot stated that he was satisfied that the approach to the bridge was progressing well and that all he had to do was to order hard starboard rudder to align the vessel on the centerline of the drawspan. The pilot characterized the effect of the inadvertent hard port rudder as causing his vessel, in effect, to overshoot the range. Overshooting a range usually means to turn too late and to proceed across a line of bearing through two known landmarks rather than to steady the vessel on the line of bearing. In this case, the center axis of the drawspan was the line of bearing on which the pilot desired to steady his vessel, an axis that the pilot had to visualize because it was not defined by any established range of objects.

The maneuver elected for piloting the *Julie N* through the bridge was a departure, albeit a small one, from the pilot's usual well-tested practice and involved some peculiarities not associated with his usual method. First, the ranges that the pilot viewed from the extreme end of the starboard bridge wing would appear differently as the vessel moved away from the north fender system. Also, the vessel was heading toward the left for a longer period of time, and the vessel's heading was continually swinging to the left. These peculiarities made the maneuver more complicated than usual and consequently required more judgment and evaluation by the pilot. Finally, successful execution of the maneuver heavily depended upon the application of a substantial amount of starboard rudder at a

fairly precise point to stop the left swing and align the vessel on the centerline axis of the drawspan for passage through the bridge.

The most critical factor in this maneuver was timing, probably a matter of 10 to 15 seconds, because the heading was swinging left and the bow was pointing toward the south pier; hence, a collision with the south pier would occur unless sufficient right rudder was applied in a timely manner. The combined effect of the left rudder, probably 20 to 30 seconds longer than desired, and the increase in propeller speed caused the bow to swing so far to the left that it was not possible to avoid a collision. Thus, the delay in applying right rudder because of the inadvertent order for hard port rudder allowed the collision to occur.

***Human Performance***—The pilot of the *Julie N* may have committed a mental error, or "slip," when he unintentionally ordered "hard port" instead of "hard starboard" during the final lineup for passage through the bridge. A slip is an action not in accord with the actor's intention, the result of a good plan but poor execution.[35] Reason and Mycielska offer three principles concerning slip that appear relevant to the pilot's error. The first principle states:

> Slips occur during the largely automatic execution of some well-established or routine sequence of actions; that is, one in which the demands upon continuous attention for moment-to-moment control are relatively small.

The pilot had made this passage hundreds of times during his 3-year tenure in Portland, thus qualifying the passage as routine. During each passage, the same landmarks were used for lineup and as cues for the next step in maneuvering, and the general plan of passage was always the same.

Slips ordinarily occur during routine actions that demand little of attentional resources. However, contrary to the first principle, this particular piloting situation demanded a great deal of continuous attention because every action was critical. The second principle states:

> Slips appear to be associated with distraction or preoccupation. Or more precisely, they seem likely to occur when the limited attentional resource[36] is allocated to some external or internal matter that is unrelated to the ongoing activity.

In this accident, the pilot appeared to be preoccupied with the height of the ship's antennas located aft of the ship's bridge. This concern was expressed in the pilot's testimony in which the *Overseas New Orleans* incident was recalled.

Rarely in a ship's operational environment are tasks one-dimensional. Ship conning requires that the pilot pay attention to several tasks at once. Tasks associated with maneuvering the ship—such as control of speed and heading, awareness of distances to objects, and radio calls—compete for a pilot's attention. In this accident, navigating the ship in an unforgiving environment that required very precise ship movements made every element of the task that much more critical. The close tolerances for maneuvering made the pilot's performance more sensitive to influencing factors such as fatigue or distraction, consequently making the job more susceptible to error. The third and final principle states:

> Absent-mindedness appears to flourish in relatively familiar environments where there are few departures from the expected, and hence requires little in the way of outward vigilance.

Although "absent-minded" may be too strong a term to use in this case, it is unlikely that anyone would believe that the pilot was unfamiliar with the operating environment in and around the Portland harbor; thus, he should have been neither overly anxious nor overly vigilant.

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[35]Senders and Moray, p. 27.

[36]Wickens, p. 366.

Systems and, similarly, jobs requiring human attention, must take into consideration the limitations of human abilities, as well as equipment, and be designed so that if human errors occur, they may be recognized quickly and recovered from without major catastrophes. In this case, the risk of hitting the bridge needed to be reduced by altering the environment. This risk reduction has been accomplished since the accident by replacing the old, narrow bridge with a new bridge having an opening roughly twice that of the beam of any vessel that has previously visited Portland. The extra room to maneuver greatly enhances a pilot's ability to recover the ship from an error such as the one the *Julie N* pilot admitted. The bridge's history of vessel contact shows that the error-causing potential of the environment had to be addressed.

In this case, countermeasures to reduce the likelihood and mitigate the consequences of a navigation error may have included improved bridge fender systems, permanent and agreed-upon navigation aids in the channel, or the construction of a much wider bridge and dredging of a deeper channel for improved maneuvering.

Generally, human errors such as slips, mistakes, and word-substitution occur frequently and ordinarily have only minor consequences. However, making an error during the transit of the Million Dollar Bridge resulted in a serious consequence, a collision with the bridge causing serious damage. The transit environment needed to be improved and was by virtue of installing the new bridge and fender system.

The Safety Board concludes that the pilot of the *Julie N* misspoke when he unintentionally ordered "hard port" instead of "hard starboard" during the final lineup for passage through the bridge.

***Bridge Resource Management***—Bridge Resource Management (BRM),[37] in the classic or broad sense, had no role in the accident. However, team coordination, a component of BRM was very important. Due to the extremely short duration of the transit through the bridge, with time and space only for very minute changes in course, the coordination of bridge personnel and equipment was essential. Because lineup for passage through the Million Dollar bridge had to be precise, only the pilot's commands could be adhered to; thus, the master's role in the context of BRM was limited to maintaining a well-coordinated bridge crew so that the pilot's commands were carried out promptly and correctly. Even if during the transit the master believed that the ship was not making passage according to plan, the tight spaces for maneuvering and the short duration of the transit would have prevented him from intervening.

### Transiting the Million Dollar Bridge

Evidence that navigating through the Million Dollar Bridge was a demanding task is apparent upon examination of the 20-year history of bridge contacts made by various ships and barges under the control of various ships' captains and pilots. According to the October 1986 MDOT *Portland Bridge Fender Damage Summary of Bridge Operator Reports* to the Coast Guard MSO in Portland, Maine, 46 cases of bridge damage caused by vessels occurred between January 1976 and May 1986. Two more cases were recorded in 1987 and one in 1988. From 1989 through 1996, 22 collisions with the bridge or fender system were recorded. The bridge tenders logged only those contacts in which

[37]For more information on BRM, see Marine Accident Reports—*Collision of the Netherlands Antilles Passenger Ship* Noordam *and the Maltese Bulk Carrier* Mount Ymitos *in the Gulf of Mexico, November 6, 1993* (NTSB/MAR-95/01); *Grounding of the United Kingdom Passenger Vessel* RMS Queen Elizabeth 2 *Near Cuttyhunk Island, Vineyard Sound, Massachusetts, August 7, 1992* (NTSB/MAR-93/01); *Grounding of the U.S. Tankship* Star Connecticut, *Pacific Ocean, near Barbers Point, Hawaii, November 6, 1990* (NTSB/MAR-92/01); *Collision Between the Greek Tankship* Shinoussa *and the U.S. Towboat* Chandy N *and Tow Near Red Fish Island, Galveston Bay, Texas, July 28, 1990* (NTSB/MAR-91/03); *Ramming of the Spanish Bulk Carrier* Urduliz *by the* USS Dwight D. Eisenhower (CVN69), *Hampton Roads, Virginia, August 29, 1988* (NTSB/MAR-90/01); and *Grounding of the Greek Tankship* World Prodigy *Off the Coast of Rhode Island, June 23, 1989* (NTSB/MAR-92/01).

damage to the bridge or fender system occurred. Frequent contact was a strong indication that the passage through the bridge was too narrow for modern shipping traffic.

The east corner of the south bridge pier, which the vessel struck to produce the 33-foot-long tear in the underwater hull, could have been better shielded by fendering, as it was following the accident. However, the corner had never been a problem before because large inbound and outbound vessels normally maneuver so as to pass very close to the north fender system, a procedure that kept large vessels away from the south pier. Hence, the potential risk to tank vessels posed by the corner was not recognized. However, large vessels proceeding outbound have occasionally made contact with the fender system around the west corner of the north bascule pier. Although occasional damage has occurred to the fender system, there is no record of any vessel being holed.

The bridge's fender system was not designed to protect the bridge from the types of vessels, which have steadily increased in size, that routinely navigate its draw. In addition, the fender system was insufficient to prevent damage to bridge elements from severe impacts. The Safety Board concludes that the bridge's fender system did not provide adequate protection for the bridge or for vessels navigating through its draw. The Safety Board believes that the Federal Highway Administration and the American Association of State Highway and Transportation Officials (AASHTO) should act together to inform State highway departments of the circumstances of this accident and recommend that the States evaluate the adequacy of fendering systems at bridge piers where the systems were not designed for the type and size of vessel currently using the waterway and may not be adequate to protect the bridge and take corrective action as necessary.

Improving the chances of successfully navigating the bridge would require altering the procedures, vessels, or environment so that the job is made easier. The Casco Bay Bridge, completed in 1997, accomplished this by doubling the width of the opening for vessel traffic from 98 to 196 feet, which should reduce the number of bridge contacts by relaxing tolerances for passage and allowing pilots to recover from minor errors during lineup. This added space will give pilots a considerably larger margin for correcting an improper lineup.

Also, it is possible to design systems that are more error-tolerant. For example, fender systems can be designed to offer protection to the vessel as well as the bridge in case of an error in lineup or in conning the vessel. The much improved fender system at the new bridge is far more capable of buffering contact than the former timber fender system. The Safety Board concludes that the increased horizontal clearance and the improved fender system at the new bridge have greatly improved safety for the class of vessels that normally would have transited the old bridge and should reduce the likelihood of the bridge being struck by similar class vessels.

Assuming that those piloting the vessels through the bridge are not going to be able to align ships perfectly every time, plenty of clearance should be allowed (as the new bridge will provide for the class of vessels that transited the old bridge). Care in designing systems and processes should, when possible, also explore avenues or means for readily observing when an error is being made in time to make a correction. For example, the establishment of permanent ranges would provide an easily observable means for checking alignment for passage through the drawspan and would make it easier to detect errors in alignment and correct them. Also, a fixed set of range markers would enable the vessel's master to monitor the vessel's progress as it approaches and passes through the drawspan under the conn of the pilot. The ranges used for transiting the old bridge may be adequate for pilots experienced in conning the type and size of vessels that have traditionally called at Portland, particularly through the new wider bridge with its wider opening. However, impermanent landmarks used for ranges such as a tree or a catwalk at one of the terminals would

not be something that a master of a vessel calling at Portland could use or even know about. Further, a well-established range might prove to be very valuable to experienced pilots should wider vessels or vessels with greater freeboard, such as container vessels, start to call at Portland. When used, such ranges would give immediate feedback to pilots and masters about their precise position for lineup. In addition to more immediate feedback, these ranges should be much more accurate than the naturally occurring landmarks currently used by pilots. The Safety Board concludes that establishing a range of navigation marks and lights would contribute to safe navigation in the area where the accident occurred. The Safety Board believes that the Coast Guard should evaluate the benefit of a permanent set of ranges for vessel pilots and masters to use for navigating through the Casco Bay Bridge and establish such ranges if justified.

## Port Safety

Since any navigational improvement, such as a wider bridge opening, can result in increased vessel traffic, often by larger and different types of vessels, new safety problems are likely to be encountered in the accident area. As the character of marine traffic changes over time, the margin of safety initially attributable to the greater clearance of the new bridge may decrease as increasingly larger vessels transit the bridge. Larger tankships are already operating and could start to call in Portland. Also, land area is available upstream of the bridge; therefore, port development (such as container ship operations) above the bridge is possible. Container ships with extensive sail areas may introduce problems in piloting and ship control that differ significantly from any associated with piloting tankships of the size that have historically called at Portland. Thus, the introduction of the different classes of vessels that can now transit the new bridge may require changes in the piloting methods used to conn some vessels through the bridge. Also, new operational guidelines may be needed to meet changes in the character of navigation.

The Port Safety Forum, by bringing together those having various interests in the port, appears to offer an appropriate means to assess the needs of navigation safety on a continuing basis and to help develop operational guidance for vessels calling at various ports in the COTP Zone. In Portland, any future operational guidance for vessels would likely involve guidance on how and when to transit the new bridge. To ensure that the Port Safety Forum is regularly apprised of any problems associated with navigation through the bridge or with the bridge itself, including observations by the bridge tenders, the Safety Board concludes that participation in the Port Safety Forum by a representative of the MDOT who is familiar with bridge design or bridge maintenance would apprise the Port Safety Forum of problems involving the Casco Bay Bridge. Therefore, the Safety Board believes that the MDOT should nominate a representative familiar with bridge design or bridge maintenance to participate on the Portland Port Safety Forum. The Safety Board also concludes that in order to be recognized and used by vessel masters and pilots, operational guidance developed by the COPT or the Port Safety Forum should be published in a readily available publication such as the *U.S. Coast Pilot*. Therefore, the Safety Board believes the Coast Guard should ensure that operational guidance for vessels navigating Portland Harbor developed by the Port Safety Forum or by the COPT is published in a source readily available to vessel masters and pilots, such as the *U.S. Coast Pilot*.

## Postaccident Testing

***Testing of the Julie N's Pilot and Crew—*** The failure of the pilot to be tested for alcohol demonstrates that there continues to be a lack of understanding of Coast Guard regulations, particularly by marine employers. The pilot's understanding that only urine was required for postaccident testing was not unique; the belief was also shared by the principal owner of the tugboat company with which the pilot was associated. Further, the fact that urine is usually collected but that breath or blood is frequently not tested suggests there may be a prevalent

belief that urine is the sole specimen required for postaccident testing. Also, the Safety Board has observed in its marine investigations that where any attempt to conduct postaccident testing for alcohol and other drugs is made, it is usual for only urine specimens to be collected, and that breath testing is rarely accomplished. If breath testing is done, it nearly always is conducted too late to achieve meaningful results.

It is possible that the requirement for U.S. companies and vessels to conduct urine collection for the required preemployment, periodic, and random drug testing may inadvertently cause marine employers to believe that urine is the sole specimen needed. Because there are no requirements for random alcohol testing on U.S. and most foreign vessels, mariners and shipping companies are unlikely to be familiar with alcohol testing and may never experience breath or blood testing for alcohol unless involved in a marine accident. In this accident, the secretary at the pilot's tugboat company was accustomed to making appointments for random testing, the type of testing normally done by the testing clinic.

The pilot knew that the secretary for the tugboat company was aware of the accident, and he stated that he believed the secretary understood that he was to be tested because of his involvement in the accident. Hence, he believed that the secretary knew the purpose of the testing and had communicated the proper instructions to the testing clinic. The pilot stated that when he was asked to sign a form provided by the receptionist (which had the box for random testing checked) certifying that the sample was his, he merely signed without reading or questioning it as he considered that signing was simply a required step in the process. Again, this appears to be a likely action by someone who had not adequately informed himself about postaccident testing requirements in the Coast Guard regulations, an obligation of a licensed officer. This was not an isolated example of unfamiliarity with postaccident testing requirements. The continuing, lack of understanding of these regulations over their nearly 10 years of existence suggests that past efforts by the Coast Guard to educate the marine industry about postaccident testing have not achieved the desired results. The Safety Board concludes that the pilot was not tested for alcohol because of the failure of the Coast Guard to adequately address the industry-wide problem of postaccident alcohol and drug testing.

The operator of the *Julie N* had a contract with a firm specializing in toxicology testing. The *Julie N* operator informed the contractor a few minutes after the accident and directed the contractor to test all personnel on board the *Julie N*. About 1330, some 2½ hours after the accident, which included a few minutes wait on the pier, two technicians were escorted on board to start the testing. The technicians elected to collect urine specimens first and conduct breath testing later. Thus, breath testing did not commence until about 1620, more than 5 hours after the accident, and was not completed until nearly 1800. Moreover, the master, the crewmember most directly involved in the accident, was among the last to be tested. In this case, the vessel operator had made a proper effort to be prepared by having a testing firm under contract and by notifying that firm in a timely manner to begin the testing. However, the decision by the testing technicians to delay breath testing until the urine specimens were collected greatly diminished the possibility of detecting alcohol. Nothing in the regulations stated or indicated that testing for alcohol should be conducted first and urine specimen collection should be conducted afterwards; hence, the testing technicians did not violate any regulations. This demonstrates that despite preparations by the vessel operator and timely orders to the testing contractor to conduct the testing, it is possible to conduct less than adequate testing and not be in violation of the regulations. Consequently, the Safety Board concludes that Coast Guard regulations for postaccident testing do not communicate clearly that alcohol testing is more time-sensitive and should be conducted as early as possible and before collecting urine specimens. The Safety Board believes that the Coast Guard should incorporate language into the postaccident testing

regulations that clearly states alcohol testing is more time-sensitive and therefore should be conducted ahead of drug testing.

In this case, an accident investigator in the Coast Guard MSO called the tugboat company and the operator of the *Julie N* to remind both companies that post-serious-marine-incident testing was needed. Both companies assured the Coast Guard caller that testing was already being arranged. The Coast Guard caller did not explain the requirements for such testing. The positive responses from the two companies that testing had already been arranged would not have suggested that the Coast Guard representative needed to provide further explanation. However, a brief explanation to the pilot's tugboat company that post-serious-marine-incident testing involved the testing of breath or blood as well as urine might have been sufficient to alert the testing clinic that the testing was for postaccident purposes.

***Coast Guard Role in Postaccident Testing***—Not since the *Exxon Valdez* accident in 1989, in which alcohol use was found to be a causal factor, has the Safety Board found alcohol or drug use to be a casual factor in any marine accident it has investigated. However, alcohol or other drugs could not be ruled out in numerous accidents investigated by the Safety Board, as indicated in table 1, because the postaccident testing was either not done or was delayed so long as to make the testing meaningless. An effective postaccident testing program is needed so that any use of alcohol or other drugs by any person in a safety-sensitive position can either be detected or scientifically eliminated as a casual factor. An effective program also may serve as a deterrent to the use of alcohol or dangerous drugs by personnel performing safety-sensitive duties, such as watchstanding. The *Julie N* and five subsequent accidents (see table 1) illustrate that postaccident testing is not yet a reliable process for examining the factors of probable cause or for accurately assessing influences on safety attributable to alcohol or drugs.

The regulations at 33 CFR 95 and 46 CFR 4.06 both place the responsibility for testing on the marine employer, but neither set of regulations contain any enforcement provisions that could be applied to the marine employer. Lacking enforcement, the Coast Guard had to rely upon education and persuasion to get marine employers to recognize and carry out their responsibilities under the regulations for postaccident testing. The Coast Guard's efforts to acquire compliance voluntarily have produced positive results, as evidenced by the fact that the MOC, the operator of the *Julie N*, had a standing contract for drug and alcohol testing and also had breath-testing devices and urine collection kits on its foreign vessels and had trained personnel on its vessels to use the equipment. Even in accidents involving foreign vessels in international waters near the United States, such as the *Noordam*, *Mount Ymitos*, and *Royal Majesty* accidents,[38] vessel crews voluntarily complied with Coast Guard requests that postaccident testing be conducted.

However, persuasion, which may be adequate in the case of conscientious marine employers, has its limitations. It appears that one of the missing factors in postaccident testing has been a lack of enforcement capability. The recently acquired authority in 46 U.S.C. 2115 to impose civil penalties on marine employers, as well as others, for failing to comply with the postaccident testing regulations is a valuable new tool for the Coast Guard. The fact that the Coast Guard now has this authority should be conveyed to all Coast Guard personnel involved in enforcing the postaccident testing regulations, to include providing guidance on how this authority should be used. The Coast Guard can convey information on this new authority in its ongoing educational efforts designed to inform marine

[38]For more information, see Marine Accident Reports—*Collision of the Netherlands Antilles Passenger Ship* Noordam *and the Maltese Bulk Carrier* Mount Ymitos *in the Gulf of Mexico, November 6, 1993* (NTSB/MAR-95/01) and *Grounding of the Panamanian Passenger Ship* Royal Majesty *on Rose and Crown Shoal Near Nantucket, Massachusetts, June 10, 1995* (NTSB/MAR-97/01).

employers about their responsibilities for postaccident testing. Knowledge that enforcement authority now exists may persuade more marine employers to place a higher priority on postaccident testing and to make preparations to conduct testing, such as acquiring contracts with independent testing firms or consortia, which could improve postaccident testing. (For additional information on civil penalties applicable to marine postaccident testing regulations and postaccident testing regulations in other transportation modes, see appendix E.)

The Safety Board concludes that because the Coast Guard now has the needed authority to enforce its postaccident testing regulations, it should make enforcing these regulations a high priority and should develop a Service-wide program with procedures and guidance to ensure that postaccident testing is an effective, reliable process for accident investigation and enforcement. The Safety Board believes that the Coast Guard should institute a task force that will evaluate deficiencies in past postaccident alcohol and drug testing performance and use "lessons learned" to implement a program that ensures testing is performed in a manner that will produce meaningful results.

In past accidents, it has been necessary for the Coast Guard to explain in detail and persuasively that postaccident testing is the responsibility of the marine employer. In addition, the Coast Guard has often furnished the marine employer with the addresses of clinics that can conduct the testing, a procedure that probably has resulted in some improvement in drug testing but has not resulted in timely testing for alcohol. The Safety Board recognizes that testing for alcohol is solely a postaccident requirement and that different individuals are normally involved in each accident; thus, it appears likely that an employer whose vessel experiences its first accident may be uninformed about testing requirements for such an event. This means that testing may be delayed until the employer is informed by the Coast Guard. This procedure may not enable an employer that is unprepared or unfamiliar with postaccident testing requirements to arrange for timely alcohol testing. Even a well-informed vessel operator may have other responsibilities following an accident that may require a higher priority than postaccident testing and thus result in delayed testing for alcohol. Accordingly, it appears that the present procedure for testing will continue to result in unacceptable delays in alcohol testing, unless the Coast Guard becomes more actively involved in ensuring that marine employers make reasonable efforts to conduct timely testing.

The Coast Guard routinely performs breath testing for alcohol of operators of recreational vessels when such operators are involved in incidents or appear to be operating improperly. It would appear feasible for Coast Guard personnel currently performing breath testing of recreational vessel operators to conduct breath testing for alcohol of the individuals on commercial vessels that are directly involved in serious marine incidents. Coast Guard personnel who are assigned to perform law enforcement or port safety functions normally would be able to be on scene to conduct breath testing for alcohol much sooner than the owner/operator or the owner/operator's testing contractor. In the *Julie N* accident, a Coast Guard representative was able to board the vessel about 1230; hence, it would have been possible to initiate breath testing of the few individuals directly involved in the accident at that time, less than 2 hours after the accident.

Requiring trained Coast Guard personnel to perform testing of individuals on commercial vessels that are involved in serious marine incidents would not appear to represent a significant increase in workload, and such a procedure would most likely result in timely testing for alcohol. Also, ALDIST 179/94, issued in 1994, allowed for breath testing for alcohol to be conducted by appropriately trained Coast Guard personnel if such testing would be more timely than that arranged by the marine employer.

The primary responsibility for postaccident testing for alcohol and other drugs in the marine

industry should remain with the employer, as in all other transportation modes. It is the marine employer's responsibility to crew the vessel with well-qualified personnel and to ensure proper performance and conduct by crewmembers on board the vessel, to include ensuring that crewmembers are not impaired by alcohol or other drugs. An extension of the marine employer's responsibilities in this area occurs when an accident takes place in a remote location well away from Coast Guard units. In such cases, postaccident testing must be performed by the vessel's crew or by technicians provided by the owner. However, the Safety Board concludes that although the primary responsibility for postaccident testing for alcohol and other drugs should remain with the marine employer, the timeliness of postaccident alcohol testing on commercial vessels could be greatly improved by having Coast Guard personnel conduct breath testing of crewmembers involved in an accident. Therefore, the Safety Board believes that the Coast Guard should implement a procedure for Coast Guard personnel to conduct breath testing of mariners who are involved in a serious marine incident, as defined by 46 CFR 4.03-2, when testing by the marine employer will not or can not take place within 2 hours of the accident.

In the *Julie N* accident, the pilot left the vessel before the first Coast Guard representative arrived. The vessel's agent was aware of the pilot's location. Also, the pilot's attorney stated that he had informed the Coast Guard officer on scene that the pilot was standing by and that the pilot had an appointment for postaccident testing. Later, he reminded the officer when it was time for the pilot to depart the area for the scheduled testing and that the officer had concurred. Thus, it appears that the pilot had good reason to believe that he was free to leave the area for testing. Also, the pilot was readily available for interview the next day and participated in the Safety Board's deposition proceedings.

However, in some other accidents, marine pilots and crewmembers have not been available. Unless the crew is placed under subpoena, nothing prevents the crew of a foreign vessel from being transported out of the country. Accordingly, it should be required, when feasible, that the entire crew, including the marine pilot, remain with the vessel for breath testing by the Coast Guard or until given permission by the Coast Guard to leave the vessel. The Safety Board concludes that requiring the crewmembers and pilot involved in a marine accident to remain with the vessel, when it is safe to do so, for breath testing by the Coast Guard would help to ensure that these individuals are tested for alcohol in a timely manner. Therefore, the Safety Board believes that the Coast Guard should establish a requirement in the postaccident testing regulations that the crew and pilot of a vessel involved in a serious marine incident will remain with the vessel, when it is safe to do, for breath testing for alcohol, until permitted by the Coast Guard to leave the vessel.

The regulations at 46 CFR 4.06 require U.S. oceangoing ships to carry breath-testing devices and to have urine specimen collection and shipping kits readily available.[39] The Safety Board considers the intent of this requirement to be a reasonable effort to enable postaccident testing to be carried out expeditiously. Unfortunately, the option allowing vessels to forgo carrying the urine collection and shipping kits if they can be obtained in 24 hours can defeat the intent of the regulation and lead to unacceptable delays in testing. Eliminating the 24-hour option and requiring the equipment to be on board would eliminate the need to acquire this equipment on a time-consuming case-by-case basis and then transport the equipment to the vessel. Having the equipment on board would also make it possible for the vessel's officers to conduct testing when Coast Guard or shoreside technicians cannot reach the vessel in a timely manner. Because most oceangoing ships entering

[39]The *Julie N* had such equipment on board, but MOC, the operator of the vessel, elected to have an independent contractor perform the testing. MOC only allows crewmembers to perform postaccident testing when an independent testing agency is not readily available.

U.S. ports are foreign vessels,[40] it appears likely that marine casualties will probably involve such vessels as frequently as U.S. vessels. This is borne out by the data in table 1, which show that over half of these accidents on U.S navigable waters investigated by the Safety Board involved foreign vessels. Accordingly, the Safety Board concludes that foreign, as well as U.S. vessels, should be required to carry breath-testing devices and urine specimen collection and shipping kits on board so that postaccident testing can be carried out in a timely manner. Therefore, the Safety Board believes that the Coast Guard should establish a requirement in the postaccident testing regulations that foreign commercial vessels on the navigable waters of the United States, as well as U.S. oceangoing vessels, must have on board breath-testing devices capable of determining the presence of alcohol in a person's system and urine specimen collection and shipping kits.

Having the breath-testing and urine collection and shipping kits on board is important for timely testing, but knowledge about how to use the devices is also crucial. Accordingly, the Safety Board concludes that a vessel plan for conducting postaccident testing would ensure that the marine employer and vessel personnel would be aware of the requirements for postaccident testing, trained to use the testing and collection equipment on board, and informed about where to send urine specimens for analysis. Therefore, the Safety Board believes that the Coast Guard should establish a requirement in the postaccident testing regulations that foreign vessels on the navigable waters of the United States and oceangoing U.S. vessels have a postaccident testing plan that:

- Identifies the crewmembers who will conduct the testing,
- Sets forth the qualifications for crewmembers assigned to conduct the testing,
- Establishes procedures for the care of specimens, including chain of custody,
- Lists the records to be prepared, and
- Provides identification and addresses for testing laboratories that can process urine specimens or testing firms that may assist or conduct postaccident testing for vessels in U.S. ports.

## Coast Guard Regulations for Postaccident Testing

***Lack of Uniformity in Regulations***—The lack of uniformity between 33 CFR 95 (*Operating a Vessel While Intoxicated*) and 46 CFR 4.06 (*Mandatory Chemical Testing Following Serious Marine Incidents Involving Vessels in Commercial Service*) regarding when to test and what specimens to collect for what purpose probably contributed to the misunderstanding expressed by the pilot of the *Julie N* and the principal owner of the tugboat company that only urine was needed for postaccident testing.

A review of the postaccident testing regulations revealed that they are difficult to comprehend due in part to being located in two different places in the CFR (33 CFR 95 and 46 CFR 4.06) and because the regulations state different things. In fact, it appears that no relationship exists between the two bodies of regulations. For example, a statement in 33 CFR 95 clearly states that it applies to foreign vessels on U.S. waters, as well as to U.S. vessels anywhere. The rules at 46 CFR 4.06 do not clearly state that they are applicable to foreign vessels. Further, the location of the rules in Title 46, normally considered as being intended for U.S. vessels; the references to 46 CFR 16, the

[40]According to data collected by the U.S. Customs Service and collated by the Bureau of the Census, there were 85,330 port calls (arrival of vessels) in U.S. ports in 1996 by foreign vessels and 10,170 by U.S vessels. Some port calls were made by the same vessel, as it is common for a vessel to visit more than one U.S. port during a voyage to the United States.

drug testing program for U.S. vessels; the requirements for breath-testing devices and collection kits for U.S. vessels; and the reference to administrative procedures against the license or certification of (U.S.) mariners all convey that 46 CFR 4.06 was written to apply solely to U.S. vessels.

Differing requirements and definitions were also noted that could be the root cause for much of the confusion about postaccident testing. While 33 CFR 95 clearly establishes the legal levels of intoxication for commercial vessel operators, 46 CFR 4.06 does not provide standards for alcohol intoxication. For testing purposes, 33 CFR 95 lists several specimens including breath, blood, urine, saliva, or other bodily fluids. However, the regulations at 46 CFR 4.06 add some clarity and narrow the choices by requiring urine and breath or blood specimens.

Neither of the sets of regulations clearly identifies the purpose—drugs or alcohol—for which the specimens will be tested. It is possible to deduce that breath will be used for alcohol testing because of a requirement for U.S. vessels to carry breath-testing devices capable of detecting alcohol in a person's system. Similarly, it can be deduced that urine will be used for detecting drugs because of a reference to the "urinalysis report indicating the presence of a dangerous drug or drug metabolite" a few sections later in the regulations. A reference to alcohol detected through analysis of blood suggests that blood is used for alcohol testing. The Safety Board continues to find that mariners and marine employers are not accurately informed about what to do for testing following an accident. This situation could be improved readily by inserting a minimal amount of text to explain that:

- Breath or blood is required for alcohol testing, and

- Urine is required solely for determining the use of dangerous drugs.

A simple, clear explanation of the purposes of the two categories of specimens would help eliminate confusion and misconceptions about postaccident testing and would assist the Coast Guard in its continuing effort to inform the public about testing requirements. Accordingly, the Safety Board concludes that including text in the regulations to clarify that breath or blood specimens are for alcohol testing and that urine specimens are for determining the presence of dangerous drugs would help to inform the marine industry that both urine and breath or blood specimens are required for postaccident testing. Therefore, the Safety Board believes that the Coast Guard should incorporate language into the postaccident testing regulations that clearly states that breath or blood specimens are for determining the presence of alcohol and that urine specimens are used to determine the presence of dangerous drugs.

The two sets of rules also have different thresholds for initiating postaccident testing. In 33 CFR 95, testing is required when an individual is involved in a marine accident as defined somewhat generally at 46 U.S.C. 6101, using broad language such as "material loss of property" and "material damage affecting seaworthiness or efficiency," whereas in 46 CFR 4.06, the threshold is a "serious marine incident," as defined very specifically at 46 CFR 4.03-2. The definition of "serious marine incident," which includes discharges of oil of 10,000 gallons or more, appears to be well-crafted to provide a reasonable threshold for accidents involving commercial vessels that are serious enough to warrant testing and to exclude lesser accidents where the consequences would not be severe. The Safety Board concludes that adopting the "serious marine incident" criteria described in 46 CFR 4.03-2 as the criteria for initiating postaccident testing involving commercial vessels would provide uniform, easily understood conditions for initiating testing. To provide uniformity, the Safety Board believes that the Coast Guard should adopt the criteria for "serious marine incident" described at 46 CFR 4.03-2 as the criteria for initiating postaccident

testing for commercial vessels in the regulations at 33 CFR 95 and in any future combined regulations.

***Priority for Testing***—The *Julie N*'s crew did not commence alcohol testing until more than 5 hours after the accident because the testing technicians elected to collect urine specimens first. These actions complied with the current regulations. The regulations at 33 CFR 95 and 46 CFR 4.06 do not specify a time limit for postaccident testing or set a priority for alcohol testing. The regulations at 33 CFR 95 are rather equivocal and state that when an individual must undergo testing, the individual will be directed to undergo testing "as soon as practical." The regulations at 46 CFR 4.06 are somewhat more definitive, stating that an individual who must undergo testing "shall provide the specimens as soon as practical." The term "as soon as practical," common to both sets of regulations, is the sole admonition for expediting postaccident testing and the meaning of this phrase is left to be determined by the marine employer. However, the regulations at 46 CFR 4.06 also direct the marine employer to take "all practical steps to have individuals tested as soon as the marine employer determines that a accident is likely to become a serious marine incident." The Safety Board recognizes the prudence in this particular requirement because it is the marine employer who likely will be first to determine the extent of damages or amount of oil spilled or expected to be spilled.

However, the provision in the regulations at 46 CFR 4.06-20, which requires the marine employer to ensure that urine specimen collection and shipping kits are readily available, but does not require the equipment to be maintained on board each vessel if it can be obtained within 24 hours, seems to convey an undesirable meaning to the term "readily available." This 24-hour waiver clearly sends a disquieting message that "readily available" can be construed to mean available within 24 hours and that it is acceptable to delay the start of testing by a full day. In short, it conveys the impression that the regulations require little priority for postaccident testing. Clearly, this is not desirable for drug testing and is unsatisfactory for alcohol testing, when the purpose of such testing is to ascertain if drugs or alcohol were causal factors in an accident. In this regard, the Safety Board recommended to the DOT in 1989 that both blood and urine samples be collected within 4 hours of a transportation accident.

The preamble to the testing regulations adopted in other DOT administrations[41] pursuant to the Omnibus Transportation Employee Testing Act of 1991 sets a 2-hour time period for alcohol testing. It is recognized that circumstances may delay testing and, to account for such circumstances, the regulations for all other transportation modes require the employer, when alcohol testing is not carried out within 2 hours,[42] to prepare and maintain a written record stating why the testing was not accomplished within 2 hours. The regulations recognize that testing for alcohol is unlikely to provide meaningful results after 8 hours and thus require the employer to cease attempts to test for alcohol after 8 hours and to record why testing was not accomplished. The written record explaining why testing was not accomplished in accordance with the regulations must be made available to the appropriate administration for review. Because alcohol is eliminated very quickly from the body and because the rate of elimination can vary among people, testing very soon after an accident affords the best opportunity to ascertain whether alcohol could be a casual factor in the accident. Furthermore, testing within 2 hours appears to be feasible in many marine accidents occurring on U.S. navigable waters. Adopting the requirement of most of the other DOT administrations to conduct alcohol testing within 2 hours and adopting a requirement for the marine employer to prepare and maintain a written record

[41]Federal Aviation Administration, Federal Railroad Administration, Federal Highway Administration, Federal Transit Administration, and Research and Special Programs Administration.

[42]The regulations for railroad employees ultimately settled on a 4-hour limit for alcohol testing, with efforts to test for alcohol ceasing after 8 hours. Any testing delays must be documented.

explaining why testing for alcohol was not accomplished within 2 hours, in addition to a requirement to document why testing was not accomplished in 8 hours, when attempts to test would cease, offers a plan for timely postaccident alcohol testing and a means for the Coast Guard to improve oversight of such testing. The requirement for a written record of failure to test will emphasize to the marine employers that timely testing for alcohol is needed and is expected to raise the priority for testing in relation to other postaccident responsibilities and concerns. The information in the written record will enable the Coast Guard to ascertain how closely the various marine employers are complying, determine whether adjustments in the program are needed, and decide whether enforcement action is called for. Accordingly, the Safety Board concludes that adopting a requirement that marine employees be tested within 4 hours of an accident for drugs and within 2 hours of an accident for alcohol, with attempts to test for alcohol ceasing after 8 hours, and adopting a requirement for documenting testing delays or failures would result in more timely testing and facilitate effective oversight by the Coast Guard. Therefore, the Safety Board believes that the Coast Guard should establish a requirement that postaccident testing for drugs begin within 4 hours of a serious marine incident and postaccident testing for alcohol begin within 2 hours of a serious marine incident, with attempts to test ceasing for alcohol after 8 hours, and establish a requirement that the marine employer document any testing delays or failures.

***Need to Consolidate Postaccident Testing Regulations***—Some editing and rewriting of 46 CFR 4.06 would be sufficient to eliminate gaps and make the regulations easier to comprehend; a greater amount of changing would be necessary to make 33 CFR 95 more comprehensive for commercial vessels. Confusion regarding postaccident testing requirements and procedures will persist as long as two different sets of regulations exist on postaccident testing that say different things. To address this problem, two options appear feasible: (1) Rewrite and consolidate both sets of regulations to make them identical, or (2) Locate the consolidated regulations solely in either Title 33 (33 CFR 95) or Title 46 (46 CFR 4.06).

Title 33, *Navigation and Navigable Waters,* covers numerous operational topics,[43] the majority of which pertain to all vessels transiting U.S. waters or visiting U.S. ports. For example, information and requirements concerning aids to navigation, vessel traffic service, navigation equipment and publications required for all vessels on U.S. waters, vessel equipment testing requirements before entering or departing U.S. ports, and oil spill equipment and pollution plans for all vessels transporting petroleum products to U.S. ports are all found in Title 33 of the regulations. Because the majority of the Title 33 regulations pertain to foreign vessels operating on U.S. waters, as well as U.S. vessels, Title 33 is a logical location for the regulations concerning *Operating a Vessel While Intoxicated* (33 CFR 95). Moreover, the standards for intoxication are guidance for safe navigation and are consistent with Title 33. The regulations at 33 CFR 95 establish alcohol intoxication standards for recreational vessel operators, and this is a logical location, considering that the regulations pertaining to marine parades and regattas and boating safety are all part of Title 33. Hence, Title 33 is a logical place in the Coast Guard regulations for commercial vessel operators and mariners, as well as the recreational boating public, to seek information on alcohol and drug abuse.

Unlike the regulations at Title 33, the Coast Guard regulations at Title 46 are almost exclusively concerned with U.S. commercial vessels and U.S. mariners and are directed at marine employers. The first part of Title 46, Subchapter A, *Procedures Applicable To The Public,* and Part 4 of Subchapter A, *Marine Casualties Investigations,* are widely recognized as applicable to foreign vessels that experience a marine accident on U.S. waters as well as to U.S.

[43]Of the 16 subchapters in Title 33 relating to Coast Guard functions, 12 are of interest to all vessels, including foreign vessels.

vessels anywhere. Accordingly, the location of regulations for *Mandatory Chemical Testing Following Serious Marine Incidents Involving Vessels in Commercial Service* at 46 CFR 4.06 is logical. However, Title 46, because it is largely devoted to U.S. mariners and vessels, does not invite or attract the attention of foreign vessel operators until they become involved in a marine accident.

The Safety Board concludes that the guidance to conduct testing following marine accidents, being operational in nature and applicable to all vessels, would fit best in Title 33 of the *Code of Federal Regulations*. Because one of the purposes of postaccident testing is to determine intoxication from alcohol, the standards for intoxication should be a part of the testing regulations to avoid the need to refer to other parts of the regulations which can be time-consuming and result in confusion. The Safety Board further concludes that renaming and expanding 33 CFR 95, *Operating a Vessel While Intoxicated*, by incorporating the present regulations at 46 CFR 4.06, *Mandatory Chemical Testing Following Serious Marine Incidents Involving Vessels in Commercial Service*, into 33 CFR 95 would eliminate the confusion caused by two sets of regulations, contribute to better understanding of the intent of the regulations, achieve improved postaccident testing, and demonstrate that postaccident testing applies to all vessels experiencing a serious marine incident on U.S. waters.

In combining the two sets of rules, every effort should be made to make them complete in themselves to eliminate the need for cross-referencing to other regulations, and especially to U.S. law (as is done in 33 CFR 95.001(a)), which is open to wider interpretation than regulations. The Safety Board appreciates the language currently at 33 CFR 95.005(a) that clearly states that postaccident testing regulations are applicable to all vessels on the navigable waters of the United States, including foreign vessels. Retaining such, or similar, language in any combined regulations would eliminate any misconception and clarify that all commercial vessels experiencing a serious marine incident on U.S. waters must conduct postaccident testing for alcohol and other drugs. Therefore, the Safety Board believes that the Coast Guard should expand the regulations at 33 CFR 95 to incorporate the provisions for postaccident testing currently found at 46 CFR 4.06 with a minimum of cross-referencing to other regulations, so that postaccident testing requirements are easy to read and comprehend and are found in one part of the regulations.

### Regulations of Other Modes Pursuant to the Omnibus Transportation Employee Testing Act of 1991

The preamble to the testing regulations adopted in other DOT administrations pursuant to the Omnibus Transportation Employee Testing Act of 1991 established an additional requirement concerning postaccident drinking that appears appropriate to commercial marine vessels. This requirement prohibits anyone involved in an accident from consuming alcohol for 8 hours following the accident.

In one recent accident involving an explosion on a tankship that was undergoing welding repairs, it was necessary to evacuate the crew. Once ashore, some crewmembers involved began drinking in a local bar. The crewmembers claimed ignorance of any postaccident testing requirement, and there was no regulation to prohibit postaccident drinking. While the need for individuals involved in a serious accident to refrain from consuming alcohol may be obvious, there is little reason to believe that individuals involved will automatically avoid alcohol. Further, someone who regularly consumes alcohol may be disposed to do so following the stress that can be associated with an accident. Thus, there is a need for a regulation against postaccident drinking.

A clear regulation applicable to commercial vessels, including foreign vessels on U.S. waters, would probably be sufficient to obtain compliance in most cases. Also, it would enable the Coast Guard to take enforcement action when

warranted. Accordingly, the Safety Board concludes that adopting a requirement prohibiting individuals involved in a marine accident from consuming alcohol within 8 hours of the accident would help to ensure that such individuals can be tested to determine their blood alcohol concentration at the time of the accident. The Safety Board believes that the Coast Guard should establish a provision in the postaccident testing regulations that prohibits mariners involved in an accident from consuming alcohol for 8 hours afterwards, or until breath or blood and urine specimens are collected, or until released by the Coast Guard.

# CONCLUSIONS

## Findings

1. Because the pilot was not tested, the Safety Board cannot conclusively eliminate alcohol use as a causal factor in this accident.

2. The human factors of fatigue, training, drug use, and pilot-crew interaction were not causal or contributing factors in the accident.

3. The pilot of the *Julie N* misspoke when he unintentionally ordered "hard port" instead of "hard starboard" during the final lineup for passage through the bridge.

4. The bridge's fender system did not provide adequate protection for the bridge or for vessels navigating through its draw.

5. The increased horizontal clearance and the improved fender system at the new bridge have greatly improved safety for the class of vessels that normally would have transited the old bridge and should reduce the likelihood of the bridge being struck by similar class vessels.

6. Establishing a range of navigation marks and lights would contribute to safe navigation in the area where the accident occurred.

7. Participation in the Port Safety Forum by a representative of the Maine Department of Transportation who is familiar with bridge design or bridge maintenance would apprise the Port Safety Forum of problems involving the Casco Bay Bridge.

8. In order to be recognized and used by vessel masters and pilots, operational guidance developed by the Captain of the Port or the Port Safety Forum should be published in a readily available publication such as the *U.S. Coast Pilot*.

9. The pilot was not tested for alcohol because of the failure of the Coast Guard to adequately address the industry-wide problem of postaccident alcohol and drug testing.

10. Coast Guard regulations for postaccident testing do not communicate clearly that alcohol testing is more time-sensitive and should be conducted as early as possible and before collecting urine specimens.

11. Because the Coast Guard now has the needed authority to enforce its postaccident testing regulations, it should make enforcing these regulations a high priority and should develop a Service-wide program with procedures and guidance to ensure that postaccident testing is an effective, reliable process for accident investigation and enforcement.

12. Although the primary responsibility for postaccident testing for alcohol and other drugs should remain with the marine employer, the timeliness of postaccident alcohol testing on commercial vessels could be greatly improved by having Coast Guard personnel conduct breath testing of crewmembers involved in an accident.

13. Requiring the crewmembers and pilot involved in a marine accident to remain with the vessel, when it is safe to do so, for breath testing by the Coast Guard would help to ensure that individuals involved are tested for alcohol in a timely manner.

14. Foreign, as well as U.S. vessels, should be required to carry breath-testing devices and urine specimen collection and shipping kits on board so that postaccident testing can be carried out in a timely manner.

15. A vessel plan for conducting postaccident testing would ensure that the marine employer and vessel personnel would be aware of the requirements for postaccident testing, trained to use the testing and collection equipment on board, and informed about where to send urine specimens for analysis.

16. Including text in the regulations to clarify that breath or blood specimens are for alcohol testing and that urine specimens are for determining the presence of dangerous drugs would help to inform the marine industry that both urine and breath or blood specimens are required for postaccident testing.

17. Adopting the "serious marine incident" criteria described in 46 CFR 4.03-2 as the criteria for initiating postaccident testing involving commercial vessels would provide uniform, easily understood conditions for initiating testing.

18. Adopting a requirement that marine employees be tested within 4 hours of an accident for drugs and within 2 hours of an accident for alcohol, with attempts to test ceasing for alcohol after 8 hours, and adopting a requirement for documenting testing delays or failures would result in more timely testing and facilitate effective oversight by the Coast Guard.

19. The guidance to conduct testing following serious marine incidents, being operational in nature and applicable to all vessels, would fit best in Title 33 of the *Code of Federal Regulations*.

20. Renaming and expanding 33 CFR 95, *Operating a Vessel While Intoxicated*, by incorporating the present regulations at 46 CFR 4.06, *Mandatory Chemical Testing Following Serious Marine Incidents Involving Vessels in Commercial Service*, into 33 CFR 95 would eliminate the confusion caused by two sets of regulations, contribute to better understanding of the intent of the regulations, achieve improved postaccident testing, and demonstrate that postaccident testing applies to all vessels experiencing a serious marine incident on U.S. waters.

21. Adopting a requirement prohibiting individuals involved in a marine accident from consuming alcohol within 8 hours of the accident would help to ensure that such individuals can be tested to determine their blood alcohol concentration at the time of the accident.

## Probable Cause

The National Transportation Safety Board determines that the probable cause of the collision with the Portland-South Portland (Million Dollar) Bridge was the pilot's inadvertent order to port (left) rudder instead of starboard (right) rudder. Contributing to the accident was the narrow horizontal clearance of the bridge drawspan, which afforded little leeway for human error. Contributing to the severity of the damage to the vessel and to the amount of oil spilled was a corner of the bridge pier that was not adequately shielded by the timber fender system.

# RECOMMENDATIONS

As a result of its investigation of this accident, the National Transportation Safety Board makes the following recommendations:

--**to the U.S. Coast Guard:**

Evaluate the benefit of a permanent set of ranges for vessel pilots and masters to use for navigating through the Casco Bay Bridge and establish such ranges if justified. (M-98-69)

Ensure that operational guidance for vessels navigating Portland harbor developed by the Port Safety Forum or by the Captain of the Port is published in a source readily available to vessel masters and pilots, such as the *U.S. Coast Pilot*. (M-98-70)

Incorporate language into the postaccident testing regulations that clearly states alcohol testing is more time-sensitive and therefore should be conducted ahead of drug testing. (M-98-71)

Institute a task force that will evaluate deficiencies in past postaccident alcohol and drug testing performance and use "lessons learned" to implement a program that ensures testing is performed in a manner that will produce meaningful results. (M-98-72)

Implement a procedure for Coast Guard personnel to conduct breath testing of mariners who are involved in a serious marine incident, as defined by 46 CFR 4.03-2, when testing by the marine employer will not or can not take place within 2 hours of the accident. (M-98-73)

Establish a requirement in the postaccident testing regulations that the crew and pilot of a vessel involved in a serious marine incident will remain with the vessel, when it is safe to do so, for breath testing for alcohol, until permitted by the Coast Guard to leave the vessel. (M-98-74)

Establish a requirement in the postaccident testing regulations that foreign commercial vessels on the navigable waters of the United States, as well as U.S. oceangoing vessels, must have on board breath-testing devices capable of determining the presence of alcohol in a person's system and urine specimen collection and shipping kits. (M-98-75)

Establish a requirement in the postaccident testing regulations that foreign vessels on the navigable waters of the United States and oceangoing U.S. vessels have a postaccident testing plan that identifies crewmembers who will conduct the testing; sets forth the qualifications for crewmembers assigned to conduct the testing; establishes procedures for the care of specimens, including chain of custody; lists the records to be prepared; and provides identification and addresses for testing laboratories that can process urine specimens or testing firms that may assist or conduct postaccident testing for vessels in U.S. ports. (M-98-76)

Incorporate language into the postaccident testing regulations that clearly states that breath or blood specimens are for determining the presence of alcohol and that urine specimens are used to determine the presence of dangerous drugs. (M-98-77)

To provide uniformity, adopt the criteria for "serious marine incident" described at 46 CFR 4.03-2 as the criteria for initiating postaccident testing for commercial vessels in the regulations at 33 CFR 95 and in any future combined regulations. (M-98-78)

Establish a requirement that postaccident testing for drugs begin within 4 hours of a serious marine incident and postaccident testing for alcohol begin within 2 hours of a serious marine incident, with attempts to test for alcohol ceasing after 8 hours, and establish a requirement that the marine employer document any testing delays or failures. (M-98-79)

Expand the regulations at 33 CFR 95 to incorporate the provisions for postaccident testing currently found at 46 CFR 4.06 with a minimum of cross-referencing to other regulations, so that postaccident testing requirements are easy to read and comprehend and are found in one part of the regulations. (M-98-80)

Establish a provision in the postaccident testing regulations that prohibits mariners involved in an accident from consuming alcohol for 8 hours afterwards, or until breath or blood and urine specimens are collected, or until released by the Coast Guard. (M-98-81)

**--to the Maine Department of Transportation:**

Nominate a representative familiar with bridge design or bridge maintenance to participate on the Portland Port Safety Forum. (M-98-82)

**--to the Federal Highway Administration:**

Inform, in cooperation with the American Association of State Highway and Transportation Officials, State highway departments of the circumstances of this accident and recommend that the States evaluate the adequacy of fendering systems at bridge piers where the systems were not designed for the type and size of vessel currently using the waterway and may not be adequate to protect the bridge and take corrective action as necessary. (M-98-83)

**--to the American Association of State Highway and Transportation Officials (AASHTO):**

Inform, in cooperation with the Federal Highway Administration, State highway departments of the circumstances of this accident and recommend that the States evaluate the adequacy of fendering systems at bridge piers where the systems were not designed for the type and size of vessel currently using the waterway and may not be adequate to protect the bridge and take corrective action as necessary. (M-98-84)

**BY THE NATIONAL TRANSPORTATION SAFETY BOARD**

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**GEORGE W. BLACK, JR.**
**Member**

**May 5, 1998**

# APPENDIX A

# INVESTIGATION

The National Transportation Safety Board was informed by the U.S. Coast Guard of the accident about 1500, during the afternoon of September 27, 1996, and at 1800, launched a team of investigators that arrived in Portland, Maine, shortly before midnight. The Safety Board team comprised an Investigator-in-Charge, an operations investigator, a marine engineer, a human performance investigator, and a civil engineer with expertise in bridge construction.

On September 28, Safety Board and Coast Guard investigators from the Marine Safety Office in Portland interviewed key crewmembers of the *Julie N* and the pilot on board the vessel. The crewmembers included the master, third mate, deck cadet, helmsman, chief mate, boson, second mate, and the engineering officers.

At the start of his interview, the pilot provided investigators with a signed statement describing the maneuvering of the vessel in which he clearly stated that he had inadvertently called for hard port rudder instead of hard starboard rudder immediately before the accident. Two days later, the pilot voluntarily joined investigators aboard a Coast Guard cutter to proceed through the port and the bridge to describe in detail the various navigation marks that he used in piloting large ships in and out of Portland harbor and to explain in detail the events leading to the accident.

During the next few days, other witnesses were interviewed, including a local professional photographer who had been in a small boat upstream of the bridge photographing the approach of the *Julie N* to the collision and afterwards. The investigation benefited greatly from the fine quality photographs taken by the photographer. Two other State-licensed docking masters, who had regularly piloted vessels through the Million Dollar Bridge, were interviewed. Also interviewed were the master of the *Captain Bill*, one of the tugboats standing by to assist in the docking of the *Julie N*, two bridge tenders on duty, and a Cianbro construction worker on the new bridge, who witnessed the accident. By Tuesday afternoon, October 1, 17 witnesses had been interviewed.

On Wednesday and Thursday, October 2 and 3, 1996, sworn testimony was taken from 12 of the witnesses interviewed. Parties participating in the proceedings included the Coast Guard; the Maritime Overseas Corporation, the operator of the vessel; the Board of Harbor Commissioners for Portland Harbor; the Maine Department of Transportation; and the American Pilots Association.

The Safety Board conducted a public hearing in Portland on March 13 and 14, 1997, to acquire additional information about (1) postaccident testing regulations and practices for determining the presence of alcohol and other drugs and (2) port risk assessment pertaining to navigation of large tankships in Portland harbor. Parties at the public hearing were the Coast Guard, the Maritime Overseas Corporation, the Board of Harbor Commissioners for Portland Harbor, and the Maine Department of Transportation.

# APPENDIX B

## COAST GUARD DRUG AND ALCOHOL TESTING REGULATIONS

Title 33, Part 95 (33 CFR 95)—Operating a Vessel While Intoxicated
Title 46, Subpart 4.03-2 (46 CFR 4.03-2)—Serious Marine Incident
Title 46, Subpart 4.03-4 (46 CFR 4.03-4)—Individual Directly Involved in a Serious Marine Incident
Title 46, Subpart 4.03-5 (46 CFR 4.03-5)—Medical Facility
Title 46, Subpart 4.03-6 (46 CFR 4.03-6)—Qualified Medical Personnel
Title 46, Subpart 4.03-7 (46 CFR 4.03-7)—Chemical Test
Title 46, Subpart 4.05 (46 CFR 4.05)—Notice of Marine Casualty and Voyage Records
Title 46, Subpart 4.06 (46 CFR 4.06)—Mandatory Chemical Testing Following Serious Marine Incidents Involving Vessels in Commercial Service
Title 46, Part 16 (46 CFR 16)—Chemical Testing

# SUBCHAPTER F—VESSEL OPERATING REGULATIONS

## PART 95—OPERATING A VESSEL WHILE INTOXICATED

Sec.



AUTHORITY: 46 U.S.C. 2302, 3306, and 7701; 49 CFR 1.46.

SOURCE: CGD 84-099, 52 FR 47532, Dec. 14, 1987, unless otherwise noted.

### §95.001 Purpose.

(a) The purpose of this part is to establish intoxication standards under 46 U.S.C. 2302 and to prescribe restrictions and responsibilities for personnel on vessels inspected, or subject to inspection, under Chapter 33 of Title 46 United States Code. This part does not preempt enforcement by a State of its applicable laws and regulations concerning operating a recreational vessel while intoxicated.

(b) Nothing in this part shall be construed as limiting the authority of a vessel's marine employer to limit or prohibit the use or possession of alcohol on board a vessel.

### §95.005 Applicability.

(a) This part is applicable to a vessel (except those excluded by 46 U.S.C. 2109) operated on waters subject to the jurisdiction of the United States, and to a vessel owned in the United States on the high seas. This includes a foreign vessel operated on waters subject to the jurisdiction of the United States.

(b) This part is also applicable at all times to vessels inspected, or subject to inspection, under Chapter 33 of Title 46 United States Code.

[CGD 84-099, 52 FR 47532, Dec. 14, 1987; CGD 84-009, 53 FR 13117, Apr. 21, 1988]

### §95.010 Definition of terms as used in this part.

*Alcohol* means any form or derivative of ethyl alcohol (ethanol).

*Alcohol concentration* means either grams of alcohol per 100 milliliters of blood, or grams of alcohol per 210 liters of breath.

*Chemical test* means a test which analyzes an individual's breath, blood, urine, saliva and/or other bodily fluids or tissues for evidence of drug or alcohol use.

*Controlled substance* has the same meaning assigned by 21 U.S.C. 802 and includes all substances listed on Schedules I through V as they may be revised from time to time (21 CFR Part 1308).

*Drug* means any substance (other than alcohol) that has known mind or function-altering effects on a person, specifically including any psychoactive substance, and including, but not limited to, controlled substances.

*Intoxicant* means any form of alcohol, drug or combination thereof.

*Law enforcement officer* means a Coast Guard commissioned, warrant, or petty officer; or any other law enforcement officer authorized to obtain a chemical test under Federal, State, or local law.

*Marine employer* means the owner, managing operator, charterer, agent, master, or person in charge of a vessel other than a recreational vessel.

*Recreational vessel* means a vessel meeting the definition in 46 U.S.C. 2101(25) that is then being used only for pleasure.

*Underway* means that a vessel is not at anchor, or made fast to the shore, or aground.

*Vessel* includes every description of watercraft or other artificial contrivance used, or capable of being used, as a means of transportation on water.

*Vessel owned in the United States* means any vessel documented or numbered under the laws of the United

States; and, any vessel owned by a citizen of the United States that is not documented or numbered by any nation.

[CGD 84–099, 52 FR 47532, Dec. 14, 1987; CGD 84–099, 53 FR 13117, April 21, 1988]

### § 95.015 Operating a vessel.

For purposes of this part, an individual is considered to be operating a vessel when:

(a) The individual has an essential role in the operation of a recreational vessel underway, including but not limited to navigation of the vessel or control of the vessel's propulsion system.

(b) The individual is a crewmember (including a licensed individual), pilot, or watchstander not a regular member of the crew, of a vessel other than a recreational vessel.

### § 95.020 Standard of intoxication.

An individual is intoxicated when:

(a) The individual is operating a recreational vessel and has an alcohol concentration of .10 percent by weight or more in their blood;

(b) The individual is operating a vessel other than a recreational vessel and has an alcohol concentration of .04 percent by weight or more in their blood; or,

(c) The individual is operating any vessel and the effect of the intoxicant(s) consumed by the individual on the person's manner, disposition, speech, muscular movement, general appearance or behavior is apparent by observation.

[CGD 84–099, 52 FR 47532, Dec. 14, 1987; CGD 84–099, 53 FR 13117, April 21, 1988]

### § 95.025 Adoption of State standards.

(a) This section applies to recreational vessels on waters within the geographical boundaries of a State having a statute defining a percentage of alcohol in the blood for the purposes of establishing that a person operating a vessel is intoxicated or impaired due to alcohol.

(b) If the applicable State statute establishing a standard for determining impairment due to alcohol uses the terms "under the influence," "operating while impaired," or equivalent terminology and does not separately define a percentage of alcohol in the blood for the purpose of establishing "intoxication," the standard containing the highest defined percentage of alcohol in the blood applies in lieu of the standard in § 95.020(a). If the applicable State statute contains a standard specifically applicable to establishing intoxication, in addition to standards applicable to other degrees of impairment, the standard specifically applicable to establishing intoxication applies in lieu of the standard in § 95.020(a).

(c) For the purposes of this part, a standard established by State statute and adopted under this section is applicable to the operation of any recreational vessel on waters within the geographical boundaries of the State.

### § 95.030 Evidence of intoxication.

Acceptable evidence of intoxication includes, but is not limited to:

(a) Personal observation of an individual's manner, disposition, speech, muscular movement, general appearance, or behavior; or,

(b) A chemical test.

[CGD 84–099, 53 FR 13117, April 21, 1988; CGD 84–009, 53 FR 13117, Apr. 21, 1988]

### § 95.035 Reasonable cause for directing a chemical test.

(a) Only a law enforcement officer or a marine employer may direct an individual operating a vessel to undergo a chemical test when reasonable cause exists. Reasonable cause exists when:

(1) The individual was directly involved in the occurrence of a marine casualty as defined in Chapter 61 of Title 46, United States Code, or

(2) The individual is suspected of being in violation of the standards in §§ 95.020 or 95.025.

(b) When an individual is directed to undergo a chemical test, the individual to be tested must be informed of that fact and directed to undergo a test as soon as is practicable.

(c) When practicable, a marine employer should base a determination of the existence of reasonable cause, under paragraph (a)(2) of this section, on observation by two persons.

[CGD 84–099, FR 47532, Dec. 14, 1987; CGD 84–099, 53 FR 13117, Apr. 1, 1988]

**§95.040 Refusal to submit to testing.**

(a) If an individual refuses to submit to or cooperate in the administration of a timely chemical test when directed by a law enforcement officer based on reasonable cause, evidence of the refusal is admissible in evidence in any administrative proceeding and the individual will be presumed to be intoxicated.

(b) If an individual refuses to submit to or cooperate in the administration of a timely chemical test when directed by the marine employer based on reasonable cause, evidence of the refusal is admissible in evidence in any administrative proceeding.

**§95.045 General operating rules for vessels inspected, or subject to inspection, under Chapter 33 of Title 46 United States Code.**

While on board a vessel inspected, or subject to inspection, under Chapter 33 of Title 46 United States Code, a crewmember (including a licensed individual), pilot, or watchstander not a regular member of the crew:

(a) Shall not perform or attempt to perform any scheduled duties within four hours of consuming any alcohol;

(b) Shall not be intoxicated at any time;

(c) Shall not consume any intoxicant while on watch or duty; and

(d) May consume a legal non-prescription or prescription drug provided the drug does not cause the individual to be intoxicated.

**§95.050 Responsibility for compliance.**

(a) The marine employer shall exercise due diligence to assure compliance with the applicable provisions of this part.

(b) If the marine employer has reason to believe that an individual is intoxicated, the marine employer shall not allow that individual to stand watch or perform other duties.

**§95.055 Penalties.**

An individual who is intoxicated when operating a vessel in violation of 46 U.S.C. 2302(c)—

(a) Is liable to the United States Government for a civil penalty of not more than $1,000; or

(b) Commits a class A misdemeanor, as described in 18 U.S.C. 3551 *et seq.*

[CGD 92-007, 57 FR 33261, July 27, 1992]

**§ 4.03–2 Serious marine incident.**

The term *serious marine incident* includes the following events involving a vessel in commercial service:

(a) Any marine casualty or accident as defined in §4.03–1 which is required by §4.05–1 to be reported to the Coast Guard and which results in any of the following:

(1) One or more deaths;

(2) An injury to a crewmember, passenger, or other person which requires professional medical treatment beyond first aid, and, in the case of a person employed on board a vessel in commercial service, which renders the individual unfit to perform routine vessel duties;

(3) Damage to property, as defined in §4.05–1(f) of this part, in excess of $100,000;

(4) Actual or constructive total loss of any vessel subject to inspection under 46 U.S.C. 3301; or

(5) Actual or constructive total loss of any self-propelled vessel, not subject to inspection under 46 U.S.C. 3301, of 100 gross tons or more.

(b) A discharge of oil of 10,000 gallons or more into the navigable waters of the United States, as defined in 33 U.S.C. 1321, whether or not resulting from a marine casualty.

(c) A discharge of a reportable quantity of a hazardous substance into the navigable waters of the United States, or a release of a reportable quantity of a hazardous substance into the environment of the United States, whether or not resulting from a marine casualty.

[CGD 86-067, 53 FR 47077, Nov. 21, 1988]

**§ 4.03–4 Individual directly involved in a serious marine incident.**

The term *individual directly involved in a serious marine incident* is an individual whose order, action or failure to act is determined to be, or cannot be ruled out as, a causative factor in the events leading to or causing a serious marine incident.

[CGD 86-067, 53 FR 47077, Nov. 21, 1988]

**§ 4.03–5 Medical facility.**

The term *medical facility* means an American hospital, clinic, physician's office, or laboratory, where blood and urine specimens can be collected according to recognized professional standards.

[CGD 86-067, 53 FR 47077, Nov. 21, 1988]

**§ 4.03–6 Qualified medical personnel.**

The term *qualified medical personnel* means a physician, physician's assistant, nurse, emergency medical technician, or other person authorized under State or Federal law or regulation to collect blood and urine specimens.

[CGD 86-067, 53 FR 47077, Nov. 21, 1988]

**§ 4.03–7 Chemical test.**

The term *chemical test* means a scientifically recognized test which analyzes an individual's breath, blood, urine, saliva, bodily fluids, or tissues for evidence of dangerous drug or alcohol use.

[CGD 86-067, 53 FR 47077, Nov. 21, 1988]

## Subpart 4.05—Notice of Marine Casualty and Voyage Records

### § 4.05–1 Notice of marine casualty.

(a) Immediately after the addressing of resultant safety concerns, the owner, agent, master, operator, or person in charge, shall notify the nearest Marine Safety Office, Marine Inspection Office or Coast Guard Group Office whenever a vessel is involved in a marine casualty consisting in—

(1) An unintended grounding, or an unintended strike of (allison with) a bridge;

(2) An intended grounding, or an intended strike of a bridge, that creates a hazard to navigation, the environment, or the safety of a vessel, or that meets any criterion of paragraphs (a)(3) through (7);

(3) A loss of main propulsion, primary steering, or any associated component or control system that reduces the maneuverability of the vessel;

(4) An occurrence materially and adversely affecting the vessel's seaworthiness or fitness for service or route, including but not limited to fire, flooding, or failure of or damage to fixed fire-extinguishing systems, lifesaving equipment, auxiliary power-generating equipment, or bilge-pumping systems;

(5) A loss of life;

(6) An injury that requires professional medical treatment (treatment beyond first aid) and, if the person is engaged or employed on board a vessel in commercial service, that renders the individual unfit to perform his or her routine duties; or

(7) An occurrence causing property-damage in excess of $25,000, this damage including the cost of labor and material to restore the property to its condition before the occurrence, but not including the cost of salvage, cleaning, gas-freeing, drydocking, or demurrage.

(b) Notice given as required by 33 CFR 160.215 satisfies the requirement of this section if the marine casualty involves a hazardous condition as defined by 33 CFR 160.203.

[CGD 94–030, 59 FR 39471, Aug. 3, 1994]

## Subpart 4.06—Mandatory Chemical Testing Following Serious Marine Incidents Involving Vessels in Commercial Service

SOURCE: CGD 86-067, 53 FR 47078, Nov. 21, 1988, unless otherwise noted.

### § 4.06-1 Responsibilities of the marine employer.

(a) At the time of occurrence of a marine casualty, a discharge of oil into the navigable waters of the United States, a discharge of a hazardous substance into the navigable waters of the United States, or a release of a hazardous substance into the environment of the United States, the marine employer shall make a timely, good faith determination as to whether the occurrence currently is, or is likely to become, a serious marine incident.

(b) When a marine employer determines that a casualty or incident is, or is likely to become, a serious marine incident, the marine employer shall take all practicable steps to have each individual engaged or employed on board the vessel who is directly involved in the incident chemically tested for evidence of drug and alcohol use.

(c) The determination of which individuals are directly involved in a serious marine incident is to be made by the marine employer. A law enforcement officer may determine that additional individuals are directly involved in the serious marine incident. In such cases, the marine employer shall take all practicable steps to have these individuals tested in accordance with paragraph (b) of this section.

(d) The requirements of this subpart shall not prevent vessel personnel who are required to be tested from performing duties in the aftermath of a serious marine incident when their performance is necessary for the preservation of life or property or the protection of the environment.

(e) The marine employer shall ensure that all individuals engaged or employed on board a vessel are fully indoctrinated in the requirements of this subpart, and that appropriate vessel personnel are trained as necessary in the practical applications of these requirements.

(f) Each marine employer shall implement the testing requirements of this subpart in accordance with the implementation schedule provided in 46 CFR 16.205 and 16.207.

### § 4.06-5 Responsibilities of individuals directly involved in serious marine incidents.

(a) Any individual engaged or employed on board a vessel who is determined to be directly involved in a serious marine incident shall provide blood, breath or urine specimens for chemical tests required by § 4.06-10 when directed to do so by the marine employer or a law enforcement officer.

(b) If the individual refuses to provide blood, breath or urine specimens, this refusal shall be noted on Form CG-2692B and in the vessel's official log book, if one is required.

(c) No individual may be forcibly compelled to provide specimens for chemical tests required by this part; however, refusal is considered a violation of regulation and could subject the individual to suspension and revocation proceedings under part 5 of this chapter and removal from any duties which directly affect the safety of the vessel's navigation or operations.

### §4.06-10 Required specimens.

Each individual required to submit to chemical testing shall, as soon as practicable, provide the following specimens for chemical testing:

(a) Urine specimens, collected in accordance with §4.06-20 and part 16 of this chapter.

(b) Blood or breath specimens, or both, collected in accordance with §4.06-20.

### §4.06-20 Specimen collection requirements.

(a) All inspected vessels certificated for unrestricted ocean routes, and all inspected vessels certificated for restricted overseas routes, are required to have on board at all times a breath testing device capable of determining the presence of alcohol in a person's system. The breath testing device shall be used in accordance with procedures specified by the manufacturer.

(b) The marine employer shall ensure that urine specimen collection and shipping kits meeting the requirements of §16.330 of this part are readily available for use following serious marine incidents. The specimen collection and shipping kits need not be maintained aboard each vessel if they can otherwise be readily obtained within 24 hours from the time of the occurrence of the serious marine incident.

(c) The marine employer shall ensure that specimens required by §4.06-10 are collected as soon as practicable following the occurrence of a serious marine incident.

(d) When obtaining blood, breath, and urine specimens, the marine employer shall ensure that the collection process is supervised by either qualified collection personnel, the marine employer, a law enforcement officer, or the marine employer's representative.

(e) Chemical tests of an individual's breath for the presence of alcohol using a breath testing device may be conducted by any individual trained to conduct such tests. Blood specimens shall be taken only by qualified medical personnel.

### §4.06-30 Specimen collection in incidents involving fatalities.

(a) When an individual engaged or employed on board a vessel dies as a result of a serious marine incident, blood and urine specimens must be obtained from the remains of the individual for chemical testing, if practicable to do so. The marine employer shall notify the appropriate local authority, such as the coroner or medical examiner, as soon as possible, of the fatality and of the requirements of this subpart. The marine employer shall provide the specimen collection and shipping kit and request that the local authority assist in obtaining the necessary specimens. When the custodian of the remains is a person other than the local authority, the marine employer shall request the custodian to cooperate in obtaining the specimens required under this part.

(b) If the local authority or custodian of the remains declines to cooperate in obtaining the necessary specimens, the marine employer shall provide an explanation of the circumstances on Form CG-2692B (Report of Required Chemical Drug and Alcohol Testing Following a Serious Marine Incident).

### §4.06-40 Specimen handling and shipping.

(a) The marine employer shall ensure that blood specimens collected in accordance with §§4.06-20 and 4.06-30 are promptly shipped to a testing laboratory qualified to conduct tests on such specimens. A proper chain of custody must be maintained for each specimen from the time of collection through the authorized disposition of the specimen. Blood specimens must be shipped to the laboratory in a cooled condition by any means adequate to ensure delivery

within twenty-four (24) hours of receipt by the carrier.

(b) The marine employer shall ensure that the urine specimen collection procedures of § 16.310 of this part and the chain of custody requirements of § 16.320 are complied with. The marine employer shall ensure that urine specimens required by §§ 4.06–20 and 4. 06–30 are promptly shipped to a laboratory complying with the requirements of 49 CFR part 40. Urine specimens must be shipped by an expeditious means, but need not be shipped in a cooled condition for overnight delivery.

### § 4.06–50 Specimen analysis and follow-up procedures.

(a) Each laboratory will provide prompt analysis of specimens collected under this subpart, consistent with the need to develop all relevant information and to produce a complete analysis report.

(b) Reports shall be sent to the Medical Review Officer meeting the requirements of 49 CFR 40.33, as designated by the marine employer submitting the specimen for testing. Wherever a urinalysis report indicates the presence of a dangerous drug or drug metabolite, the Medical Review Officer shall review the report as required by 49 CFR 40.33 and submit his or her findings to the marine employer. Blood test reports indicating the presence of alcohol shall be similarly reviewed to determine if there is a legitimate medical explanation.

(c) Analysis results which indicate the presence of alcohol, dangerous drugs, or drug metabolites shall not be construed by themselves as constituting a finding that use of drugs or alcohol was the probable cause of a serious marine incident.

[CGD 86-067, 53 FR 47078, Nov. 21, 1988, as amended by CGD 90-053, 58 FR 31107, May 28, 1993]

### § 4.06–60 Submission of reports and test results.

(a) Whenever an individual engaged or employed on a vessel is identified as being directly involved in a serious marine incident, the marine employer shall complete Form CG–2692B (Report of Required Chemical Drug and Alcohol Testing Following a Serous Marine Incident).

(b) When the serious marine incident requires the submission of Form CG–2692 (Report of Marine Casualty, Injury or Death) to the Coast Guard in accordance with § 4.05–10, the report required by paragraph (a) of this section shall be appended to Form CG–2692.

(c) In incidents involving discharges of oil or hazardous substances as described in § 4.03–2 (b) and (c) of this part, when Form CG–2692 is not required to be submitted, the report required by paragraph (a) of this section shall be submitted to the Coast Guard Officer in Charge, Marine Inspection, having jurisdiction over the location where the discharge occurred or nearest the port of first arrival following the discharge.

(d) Upon receipt of the report of chemical test results, the marine employer shall submit a copy of the test results for each person listed on the CG–2692B to the Coast Guard Officer in Charge, Marine Inspection to whom the CG–2692B was submitted.

# PART 16—CHEMICAL TESTING

## Subpart A—General



## Subpart B—Required Chemical Testing



## Subpart C—Standards for Chemical Testing for Dangerous Drugs



## Subpart D—Employee Assistance Programs



## Subpart E—Management Information System



AUTHORITY: 46 U.S.C. 2103, 3306, 7101, 7301, and 7701; 49 CFR 1.46.

SOURCE: CGD 86-067, 53 FR 47079, Nov. 21, 1988, unless otherwise noted.

## Subpart A—General

### § 16.101 Purpose of regulations.

(a) The regulations in this part provide a means to minimize the use of intoxicants by merchant marine personnel and to promote a drug free and safe work environment.

(b) These regulations prescribe the minimum standards, procedures, and means to be used to test for the use of dangerous drugs.

(c) As part of a reasonable cause drug testing program established pursuant to this part, employers may test for drugs in addition to those specified in this part only with approval granted by the Coast Guard under 49 CFR part 40 and for substances for which the Department of Health and Human Services has established an approved testing protocol and positive threshold.

### § 16.105 Definitions of terms used in this part.

*Chemical test* means a scientifically recognized test which analyzes an individual's breath, blood, urine, saliva, bodily fluids, or tissues for evidence of dangerous drug or alcohol use.

*Crewmember* means an individual who is:

(a) On board a vessel acting under the authority of a license, certificate of registry, or merchant mariner's document issued under this subchapter, whether or not the individual is a member of the vessel's crew; or

(b) Engaged or employed on board a vessel owned in the United States that is required by law or regulation to engage, employ, or be operated by an individual holding a license, certificate of registry, or merchant mariner's document issued under this subchapter, except the following:

(1) Individuals on fish processing vessels who are primarily employed in the preparation of fish or fish products, or in a support position, and who have no duties that directly affect the safe operation of the vessel;

(2) Scientific personnel on an oceanographic research vessel;

(3) Individuals on industrial vessels who are industrial personnel, as defined in this chapter; and

(4) Individuals not required under part 15 of this subchapter who have no duties that directly affect the safe operation of the vessel.

*Dangerous drug* means a narcotic drug, a controlled substance, or a controlled-substance analog (as defined in section 102 of the Comprehensive Drug Abuse and Control Act of 1970 (21 U.S.C. 802)).

*Dangerous drug level* means the amount of traces of dangerous drugs or drug metabolites in an individual's breath, blood, urine, saliva, or body fluids or tissues.

*Drug test* means a chemical test of an individual's urine for evidence of dangerous drug use.

*Employer* means a marine employer or sponsoring organization.

*Fails a chemical test for dangerous drugs* means that the result of a chemical test conducted in accordance with 49 CFR part 40 is reported as "positive" for the presence of dangerous drugs or drug metabolites in an individual's system by a Medical Review Officer in accordance with that part.

*Intoxicant* means any form of alcohol, dangerous drug, or combination thereof.

*Marine employer* means the owner, managing operator, charterer, agent, master, or person in charge of a vessel, other than a recreational vessel.

*Medical Review Officer* means an individual designated by the employer to carry out the duties specified in § 16.370 of this part.

*Operation* means to navigate, steer, direct, manage, or sail a vessel, or to control, monitor, or maintain the vessel's main or auxiliary equipment or systems. Operation includes:

(a) Determining the vessel's position, piloting, directing the vessel along a desired trackline, keeping account of the vessel's progress through the water, ordering or executing changes in course, rudder position, or speed, and maintaining a lookout;

(b) Controlling, operating, monitoring, maintaining, or testing: the vessel's propulsion and steering systems; electric power generators; bilge, ballast, fire, and cargo pumps; deck machinery including winches, windlasses, and lifting equipment; lifesaving equipment and appliances; firefighting systems and equipment; and navigation and communication equipment; and

(c) Mooring, anchoring, and line handling; loading or discharging of cargo or fuel; assembling or disassembling of tows; and maintaining the vessel's stability and watertight integrity.

*Passes a chemical test for dangerous drugs* means the result of a chemical test conducted in accordance with 49 CFR part 40 is reported as "negative" by a Medical Review Officer in accordance with that part.

*Positive rate* means the number of positive results for random drug tests conducted under this part plus the number of refusals to take random tests required by this part, divided by the total number of random drug tests conducted under this part plus the number of refusals to take random tests required by this part.

*Refuse to submit* means that a crewmember fails to provide a urine sample as required by 49 CFR part 40, without a genuine inability to provide a specimen (as determined by a medical evaluation), after he or she has received notice of the requirement to be tested in accordance with the provisions of this part, or engages in conduct that clearly obstructs the testing process.

*Serious marine incident* means an event defined in 46 CFR 4.03–2.

*Sponsoring organization* is any company, consortium, corporation, association, union, or other organization with

which individuals serving in the marine industry, or their employers, are associated.

*Vessel owned in the United States* means any vessel documented or numbered under the laws of the United States; and any vessel owned by a citizen of the United States that is not documented or numbered by any nation.

[CGD 86-067, 53 FR 47079, Nov. 21, 1988; 53 FR 48367, Nov. 30, 1988, as amended by CGD 90-014, 56 FR 31033, July 8, 1991; CGD 90-053, 58 FR 31107, May 28, 1993; CGD 93-051, 59 FR 28792, June 3, 1994; 59 FR 62226, Dec. 2, 1994; CGD 91-223, 60 FR 4525, Jan. 23, 1995]

## Subpart B—Required Chemical Testing

### § 16.201 Application.

(a) Chemical testing of personnel must be conducted as required by this subpart.

(b) If an individual fails a chemical test for dangerous drugs under this part, the individual will be presumed to be a user of dangerous drugs.

(c) If an individual holding a license, certificate of registry, or merchant mariner's document fails a chemical test for dangerous drugs, the individual's employer or prospective employer shall report the test results in writing to the nearest Coast Guard Officer in Charge, Marine Inspection (OCMI). The individual shall be denied employment as a crewmember or removed from duties which directly affect the safe operation of the vessel as soon as practicable and shall be subject to suspension and revocation proceedings against his or her license, certificate of registry, or merchant mariner's document under 46 CFR part 5.

(d) If an individual who does not hold a license, certificate of registry, or merchant mariner's document fails a chemical test for dangerous drugs, the individual shall be denied employment as a crewmember or removed from duties which directly affect the safe operation of the vessel as soon as possible.

(e) An individual who has failed a required chemical test for dangerous drugs may not be reemployed aboard a vessel until the requirements of § 16.370(d) of this part and 46 CFR part 5, if applicable, have been satisfied.

[CGD 86-067, 53 FR 47049, November 11, 1988, as amended by CGD 90-014, 56 FR 31034, July 8, 1991]

### § 16.205 Implementation of chemical testing programs.

(a) When a vessel owned in the United States is operating in waters that are not subject to the jurisdiction of the United States, the testing requirements of §§ 16.210 and 16.230 do not apply to a citizen of a foreign country engaged or employed as pilot in accordance with the laws or customs of that foreign country.

(b) Upon written request of an employer, Commandant (G-MOA) will review the employer's chemical testing program to determine compliance with the provisions of this part.

[CGD 90-014, 56 FR 60930, Nov. 30, 1991, as amended by 59 FR 62226, Dec. 2, 1994; CGD 95-072, 60 FR 50461, Sept. 29, 1995; CGD 96-041, 61 FR 50726, Sept. 27, 1996; CGD 95-028, 62 FR 51196, Sept. 30, 1997]

EFFECTIVE DATE NOTE: At 62 FR 51196, Sept. 30, 1997, § 16.205 was amended by removing paragraphs (a) through (e) and redesignating paragraphs (f) and (g) as (a) and (b), effective Oct. 30, 1997. For the convenience of the user, the superseded text is set forth as follows:

#### § 16.205 Implementation of chemical testing programs.

(a) Each employer who employs more than 50 employees required to be tested under this part was required to implement the pre-employment testing program required by this part not later than July 21, 1989, and the serious marine incident and reasonable cause testing programs required by this part no later than December 21, 1989. The random testing program required by this parts shall be implemented no later than October 1, 1991.

(b) Each employer who employs from 11 to 50 employees required to be tested under this part was required to implement the pre-employment, serious marine incident and reasonable cause testing programs required by this part no later than December 21, 1990. The random testing program required by this part shall be implemented no later than October 1, 1991.

(c) Each employer who employs 10 or fewer employees required to be tested under this part was required to implement the pre-employment, serious marine incident and reasonable cause testing programs required by this part no later than December 21, 1990. The random testing program required by this

part shall be implemented not later than October 1, 1991.

(d) [Reserved]

(e) The periodic testing requirements of §16.220 apply to physical examinations performed after December 21, 1990.

* * * * *

**§ 16.207 Conflict with foreign laws.**

(a) This part applies to the testing of all U.S. crewmembers onboard U.S. vessels operating in waters that are subject to the jurisdiction of a foreign government on and after January 2, 1997; however, implementation may be delayed until July 1, 1997.

(b) Employers for whom compliance with this part would violate the domestic laws or policies of another country may request an exemption from the drug testing requirements of this part by submitting a written request to Commandant (G–MOA), at the address listed in §16.500(a).

[CGD 95–011, 61 FR 66613, Dec. 18, 1996]

**§ 16.210 Pre-employment testing requirements.**

(a) No marine employer shall engage or employ any individual to serve as a crewmember unless the individual passes a chemical test for dangerous drugs for that employer.

(b) An employer may waive a pre-employment test required for a job applicant by paragraph (a) of this section if the individual provides satisfactory evidence that he or she has:

(1) Passed a chemical test for dangerous drugs, required by this part, within the previous six months with no subsequent positive drug tests during the remainder of the six-month period; or

(2) During the previous 185 days been subject to a random testing program required by §16.230 for at least 60 days and did not fail or refuse to participate in a chemical test for dangerous drugs required by this part.

[CGD 90–053, 58 FR 31107, May 28, 1993, as amended by CGD 93–051, 59 FR 28792, June 3, 1994]

**§ 16.220 Periodic testing requirements.**

(a) Except as provided by paragraph (c) of this section, and §§10.209(h) and 12.02–9(f) of this subchapter, an applicant for an original issuance or a renewal of a license or a certificate of registry (COR), a raise in grade of a license, a higher grade of COR, an original issuance of a merchant mariner's document (MMD), the first endorsement as an able seaman, lifeboatman, qualified member of the engine department, or tankerman, or a reissuance of an MMD with a new expiration date shall be required to pass a chemical test for dangerous drugs. The applicant shall provide the results of the test to the Coast Guard Regional Examination Center (REC) at the time of submitting an application. The test results must be completed and dated not more than 185 days prior to submission of the application.

(b) Unless excepted under paragraph (c) of this section, each pilot required by this subchapter to receive an annual physical examination must pass a chemical test for dangerous drugs as a part of that examination. The individual shall provide the results of each test required by this section to the REC when the pilot applies for a license renewal or when requested by the Coast Guard.

(c) An applicant need not submit evidence of passing a chemical test for dangerous drugs required by paragraph (a) or (b) of this section if he or she provides satisfactory evidence that he or she has—

(1) Passed a chemical test for dangerous drugs required by this part within the previous six months with no subsequent positive chemical tests during the remainder of the 6-month period; or

(2) During the previous 185 days been subject to a random testing program required by §16.230 for at least 60 days and did not fail or refuse to participate in a chemical test for dangerous drugs required by this part.

(d) Except as provided by paragraph (b) of this section, an applicant is required to provide the results of only one chemical test for dangerous drugs when multiple transactions are covered by or requested in a single application.

[CGD 91–223, 60 FR 4525, Jan. 23, 1995]

**§ 16.230 Random testing requirements.**

(a) Marine employers shall establish programs for the chemical testing for

dangerous drugs on a random basis of crewmembers on inspected vessels who:

(1) Occupy a position, or perform the duties and functions of a position, required by the vessel's Certificate of Inspection;

(2) Perform the duties and functions of patrolmen or watchmen required by this chapter; or,

(3) Are specifically assigned the duties of warning, mustering, assembling, assisting, or controlling the movement of passengers during emergencies.

(b) Marine employers shall establish programs for the chemical testing for dangerous drugs on a random basis of crewmembers on uninspected vessels who:

(1) Are required by law or regulation to hold a license issued by the Coast Guard in order to perform their duties on the vessel;

(2) Perform duties and functions directly related to the safe operation of the vessel;

(3) Perform the duties and functions of patrolmen or watchmen required by this chapter; or,

(4) Are specifically assigned the duties of warning, mustering, assembling, assisting, or controlling the movement of passengers during emergencies.

(c) The selection of crewmembers for random drug testing shall be made by a scientifically valid method, such as a random number table or a computer-based random number generator that is matched with crewmembers' Social Security numbers, payroll identification numbers, or other comparable identifying numbers. Under the testing frequency and selection process used, each covered crewmember shall have an equal chance of being tested each time selections are made and an employee's chance of selection shall continue to exist throughout his or her employment. As an alternative, random selection may be accomplished by periodically selecting one or more vessels and testing all crewmembers covered by this section, provided that each vessel subject to the marine employer's test program remains equally subject to selection.

(d) Marine employers may form or otherwise use sponsoring organizations, or may use contractors, to conduct the random chemical testing programs required by this part.

(e) Except as provided in paragraph (f) of this section, the minimum annual percentage rate for random drug testing shall be 50 percent of covered crewmembers.

(f) The annual rate for random drug testing may be adjusted in accordance with this paragraph.

(1) The Commandant's decision to increase or decrease the minimum annual percentage rate for random drug testing is based on the reported random positive rate for the entire industry. All information used for this determination is drawn from the drug MIS reports required by this part. In order to ensure reliability of the data, the Commandant considers the quality and completeness of the reported data, may obtain additional information or reports from marine employers, and may make appropriate modifications in calculating the industry random positive rate. Each year, the Commandant will publish in the FEDERAL REGISTER the minimum annual percentage rate for random drug testing of covered crewmembers. The new minimum annual percentage rate for random drug testing will be applicable starting January 1 of the calendar year following publication.

(2) When the minimum annual percentage rate for random drug testing is 50 percent, the Commandant may lower this rate to 25 percent of all covered crewmembers if the Commandant determines that the data received under the reporting requirements of 46 CFR 16.500 for two consecutive calendar years indicate that the positive rate is less than 1.0 percent.

(3) When the minimum annual percentage rate for random drug testing is 25 percent, and the data received under the reporting requirements of 46 CFR 16.500 for any calendar year indicate that the positive rate is equal to or greater than 1.0 percent, the Commandant will increase the minimum annual percentage rate for random drug testing to 50 percent of all covered crewmembers.

(g) Marine employers shall randomly select a sufficient number of covered crewmembers for testing during each calendar year to equal an annual rate

not less than the minimum annual percentage rate for random drug testing determined by the Commandant. If the marine employer conducts random drug testing through a consortium, the number of crewmembers to be tested may be calculated for each individual marine employer or may be based on the total number of covered crewmembers covered by the consortium who are subject to random drug testing at the same minimum annual percentage rate under this part or any DOT drug testing rule.

(h) Each marine employer shall ensure that random drug tests conducted under this part are unannounced and that the dates for administering random tests are spread reasonably throughout the calendar year.

(i) If a given covered crewmember is subject to random drug testing under the drug testing rules of more than one DOT agency for the same marine employer, the crewmember shall be subject to random drug testing at the percentage rate established for the calendar year by the DOT agency regulating more than 50 percent of the crewmember's function.

(j) If a marine employer is required to conduct random drug testing under the drug testing rules of more than one DOT agency, the marine employer may—

(1) Establish separate pools for random selection, with each pool containing the covered crewmembers who are subject to testing at the same required rate; or

(2) Randomly select such crewmembers for testing at the highest percentage rate established for the calendar year by any DOT agency to which the marine employer is subject.

(k) An individual may not be engaged or employed, including self-employment, on a vessel in a position as master, operator, or person in charge for which a license or merchant mariner's document is required by law or regulation unless all crewmembers covered by this section are subject to the random testing requirements of this section.

[CGD 90-014, 56 FR 31034, July 8, 1991, as amended by 59 FR 62227, Dec. 2, 1994]

### § 16.240 Serious marine incident testing requirements.

The marine employer shall ensure that all persons directly involved in a serious marine incident are chemically tested for evidence of dangerous drugs and alcohol in accordance with the requirements of 46 CFR 4.06.

### § 16.250 Reasonable cause testing requirements.

(a) The marine employer shall require any crewmember engaged or employed on board a vessel owned in the United States that is required by law or regulation to engage, employ or be operated by an individual holding a license, certificate of registry, or merchant mariner's document issued under this subchapter, who is reasonably suspected of using a dangerous drug to be chemically tested for dangerous drugs.

(b) The marine employer's decision to test must be based on a reasonable and articulable belief that the individual has used a dangerous drug based on direct observation of specific, contemporaneous physical, behavioral, or performance indicators of probable use. Where practicable, this belief should be based on the observation of the individual by two persons in supervisory positions.

(c) When the marine employer requires testing of an individual under the provisions of this section, the individual must be informed of that fact and directed to provide a urine specimen as soon as practicable. This fact shall be entered in the vessel's official log book, if one is required.

(d) If an individual refuses to provide a urine specimen when directed to do so by the employer under the provisions of this section, this fact shall be entered in the vessel's official log book, if one is required.

### § 16.260 Records.

(a) Employers shall maintain records of chemical tests which the Medical Review Officer reports as *positive* for a period of at least 5 years and shall make these records available to Coast Guard officials upon request. Records of tests reported as *negative* shall be retained for one year.

(b) The records shall be sufficient to:

(1) Satisfy the requirements of §§ 16.210(b) and 16.220(c) of this part.

(2) Identify the total number of individuals chemically tested annually for dangerous drugs in each of the categories of testing required by this part including the annual number of individuals failing chemical tests and the number and types of drugs for which individuals tested positive.

[CGD 86-067, 53 FR 47079, Nov. 21, 1988, as amended by CGD 91-223, 60 FR 4526, Jan. 23, 1995]

## Subpart C—Standards for Chemical Testing for Dangerous Drugs

### § 16.301 Procedures for Transportation Workplace Drug Testing Programs.

Drug testing programs subject to this part shall be conducted in accordance with 49 CFR part 40, Procedures for Transportation Workplace Drug Testing Programs. This subpart summarizes requirements for drug testing programs contained in those regulations. Those regulations should be consulted to determine the specific procedures which must be established and utilized. Drug testing programs required by this part shall use only drug testing laboratories certified by the Department of Health and Human Services (DHHS).

### § 16.310 General.

(a) *Collection site.* The employer shall ensure that the collection site is adequate to provide for the collection, security, temporary storage, and shipping of specimens to a certified drug testing laboratory.

(b) *Security.* Procedures shall provide for the collection site to be secure. Collection sites dedicated solely for specimen collection must be secure at all times. Collection sites which are not dedicated solely for specimen collection must be secured during specimen collection.

(c) *Access to authorized personnel only.* No unauthorized personnel shall be permitted in any part of a collection site when specimens are collected nor shall unauthorized personnel be allowed access to stored specimens.

(d) *Privacy.* Procedures for collecting urine specimens shall allow for individual privacy unless there is reason to believe that a particular individual may alter or substitute the specimen to be provided.

(e) *Integrity of specimens.* Collection site personnel shall take precautions to ensure that each specimen is not adulterated or diluted during the collection process.

### § 16.320 Chain of custody.

(a) A chain of custody for each specimen to be chemically tested shall be established and maintained from the time of specimen collection through the testing of the specimen.

(b) If a specimen is not immediately prepared for shipment, it shall be safeguarded during temporary storage.

(c) Every effort shall be made to minimize the number of persons handling specimens.

### § 16.330 Specimen handling and shipping.

(a) The employer shall obtain a specimen collection and shipping kit to be used to collect specimens and ship them to the certified drug testing laboratory.

(b) The specimen collection and shipping kit, as required by 49 CFR part 40, shall contain:

(1) Plastic urine specimen bottles in a sufficient quantity to accommodate the people to be tested;

(2) Means for sealing and identifying specimen bottles;

(3) Chain of custody forms;

(4) A set of step-by-step instructions which describe the proper procedures to be followed during specimen collection, handling, and shipping; and

(5) Shipping materials.

(c) The marine employer shall ensure that specimens are promptly shipped to a certified testing laboratory meeting the requirements of § 16.340. Chain of custody documents must accompany each specimen from the time of specimen collection through shipment to and testing by the laboratory.

(d) Specimens shall be shipped by an expeditious means.

### § 16.340 Test laboratory requirements.

(a) The employer shall ensure that all chemical testing for dangerous

drugs required by this part is conducted by a DHHS certified laboratory.

(b) The laboratory shall meet the requirements of 49 CFR part 40.

### § 16.350 Specimen analysis.

(a) Each specimen shall be analyzed in accordance with 49 CFR 40.29, which requires testing for—

(1) Marijuana;
(2) Cocaine;
(3) Opiates;
(4) Phencyclidine (PCP); and
(5) Amphetamines.

(b) A specimen which indicates the presence of a dangerous drug at a level equal to or exceeding the levels established in 49 CFR 40.29 is reported to the Medical Review Officer as positive.

[CGD 90-053, 58 FR 31107, May 28, 1993]

### § 16.360 Specimen analysis reports.

(a) The laboratory shall report all test results as required by 49 CFR 40.29(g). Reports are made within an average of five days after receipt of a specimen by the laboratory.

(b) The laboratory reports as negative all specimens which are negative on the initial test or negative on the confirmatory test. Only specimens confirmed positive are reported positive to the Medical Review Officer for a specific drug or drug metabolite.

[CGD 86-067, 53 FR 47079, Nov. 21, 1988, as amended by CGD 90-053, 58 FR 31107, May 28, 1993]

### § 16.370 Medical Review Officer.

(a) The employer shall designate or appoint a Medical Review Officer (MRO) meeting the qualifications of 49 CFR 40.33. If the employer does not have a qualified individual on staff to serve as MRO, the employer may contract for the provision of MRO services as part of its drug testing program.

(b) The MRO shall review and interpret each confirmed positive test result in accordance with 49 CFR 40.33.

(c) If the MRO verifies a laboratory confirmed positive report, the MRO shall report the positive test result to the employer or the employer's designated agent.

(d) Before an individual who has failed a required chemical test for dangerous drugs may return to work aboard a vessel, the MRO shall determine that the individual is drug-free and the risk of subsequent use of dangerous drugs by that person is sufficiently low to justify his or her return to work. In addition, the individual shall agree to be subject to increased, unannounced testing for a period as determined by the MRO of up to 60 months.

[CGD 86-067, 53 FR 47079, Nov. 21, 1988; 53 FR 48367, Nov. 30, 1988, as amended by CGD 90-053, 58 FR 31107, May 28, 1993]

### § 16.380 Release of information.

(a) Except as provided for in this part and in § 4.06-60 of this chapter, an employer shall not release individual test results or other personal information for anti-drug program records.

(b) Individual results from drug tests required by this part may be released if the individual tested signs a specific authorization for the release of the results to an identified person.

(c) Nothing in this section shall prevent an individual tested under this part from obtaining the results of that test.

## Subpart D—Employee Assistance Programs

### § 16.401 Employee Assistance Program (EAP).

The employer shall provide an Employee Assistance Program (EAP) for all crewmembers. The employer may establish the EAP as a part of its internal personnel services or the employer may contract with an entity that will provide EAP services to a crewmember. Each EAP must include education and training on drug use for crewmembers and the employer's supervisory personnel as provided below:

(a) *EAP education program:* Each EAP education program must include at least the following elements: display and distribution of informational material; display and distribution of a community service hot-line telephone number for crewmember assistance, and display and distribution of the employer's policy regarding drug and alcohol use in the workplace.

(b) *EAP training program:* An EAP training program must be conducted for the employer's crewmembers and

supervisory personnel. The training program must include at least the following elements: the effects and consequences of drug and alcohol use on personal health, safety, and work environment; the manifestations and behavioral cues that may indicate drug and alcohol use and abuse; and documentation of training given to crewmembers and the employer's supervisory personnel. Supervisory personnel must receive at least 60 minutes of training.

## Subpart E—Management Information System

### § 16.500 Management Information System requirements.

(a) All marine employers shall collect the drug and alcohol testing program data identified in this section for each calendar year, January 1 to December 31. Marine employers shall submit this data to the Coast Guard by March 15 of the following year. The data shall be submitted to Commandant (G–MOA), 2100 Second Street, SW, Washington, DC, 20593–0001.

(b) All marine employers shall collect the following drug and alcohol testing program data:

(1) Number of covered employees.

(2) Number of covered employees subject to testing under the anti-drug rules of more than one DOT agency because of the nature of their assigned duties, identified by each agency.

(3) Number of drug and alcohol tests by test type. The drug test types are pre-employment, random, post-accident and reasonable cause. The alcohol test types are post-accident and reasonable cause.

(4) Number of positive drug test results verified by a Medical Review Officer (MRO) by test type and type of drug(s). Number of alcohol tests resulting in a blood alcohol concentration of .04 percent by weight or more by test type.

(5) Number of negatives reported by a MRO by type of test.

(6) Number of applicants denied employment based on a positive drug test result verified by an MRO.

(7) Number of marine employees with a positive drug test result verified by an MRO, who were returned to duty in a covered position, having met the requirements of §16.370(d) and part 5 of this chapter.

(8) Number of marine employee drug test results that MROs verify positive for more than one drug or combination of drugs.

(9) Number of covered employees who refused to submit to a drug test required under this part.

(10) Marine employee training and education information.

(c) The data listed in paragraph (b) of this section must be submitted on Form CG–5573, which is reproduced in appendix B to this part and may be obtained at any Officer in Charge, Marine Inspection. All items on the form must be completed. Data may be submitted by consortia or other employer representatives on behalf of a marine employer. Reports submitted in this manner may be on one form, but must also be accompanied by a list of marine employers for whom the report is submitted. Unless submitting the report on their own behalf, each marine employer must notify the Coast Guard (Commandant (G–MOA)) in writing of the consortium or representative that will submit the employer's data, and remains responsible for ensuring that the data is submitted and is accurate.

(d) Marine employers that conduct operations regulated by another Department of Transportation Operating Administration must submit appropriate data to that Operating Administration for those employees covered by that Operating Administration's regulations.

[CGD 91–019, 58 FR 68277, Dec. 23, 1993, as amended by CGD 95–072, 60 FR 50461, Sept. 29, 1995; CGD 96–041, 61 FR 50726, Sept. 27, 1996]

APPENDIX A [RESERVED]

## APPENDIX B - DRUG AND ALCOHOL TESTING MANAGEMENT INFORMATION SYSTEM (MIS) DATA COLLECTION FORM

**INSTRUCTIONS**

This reporting form includes four parts. Collectively, these parts address the data elements required in the United States Coast Guard (USCG) and the U.S. Department of Transportation (DOT) drug and alcohol testing regulations. The form is preceded by instructions which outline and explain the information requested and indicate the probable sources for this information. The four sections, the page number for the instructions, and the page location on the reporting form are:

| Section | Instructions Page | Reporting Form Page |
|---|---|---|
| A. MARINE EMPLOYER INFORMATION | i | 1 |
| B. COVERED EMPLOYEES | i | 1 |
| C. MARINE EMPLOYEE DRUG TESTING INFORMATION | ii-iv | 2 |
| D. MARINE EMPLOYEE ALCOHOL TESTING INFORMATION | iv-v | 2 |

Page 1 MARINE EMPLOYER INFORMATION (Section A) requires the company name for which the report is done and a current address. Below this, a signature, typed or printed name, title, date, and current telephone number (including the area code) are required from the person certifying the correctness and completeness of the form.

Page 1 COVERED EMPLOYEES (Section B) requires a count of employees (including prospective employees who were pre-employment tested) who were subject to testing under the USCG/DOT drug testing regulations. The most likely source for this information is the employer's personnel department. The count should include all covered employees working for the company during the reported year.

Additional information must be completed if your company employs personnel who perform duties covered by the drug and alcohol rules of more than one DOT operating administration. NUMBER OF EMPLOYEES COVERED BY MORE THAN ONE DOT OPERATING ADMINISTRATION, requires that you identify the number of employees under the appropriate additional operating administration(s).

The following instructions are to be used as a guide for completing the drug testing information in the USCG/DOT Drug and Alcohol Testing MIS Data Collection Form. A sample testing results table with a narrative explanation is provided on pages ii-iii as an example to facilitate the process of completing the form correctly.

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Section C is used to summarize the drug testing results for applicants and covered employees. There are four categories of testing to be completed. Items necessary to complete this table include:

1) the number of specimens collected in each testing category;
2) the number of specimens tested which were reported negative and verified positive for any drug(s); and
3) individual counts of those specimens which were verified positive for each of the five drugs.

Do not include results of quality control samples submitted to the testing laboratory in the table.

A sample table with detailed instructions is provided.

Page 2

MARINE EMPLOYEE DRUG TESTING INFORMATION (Section C) requires information for drug testing by category of testing. Each part of this table must be completed for each category of testing. These numbers do not include refusals for testing. A sample of the table with example numbers is presented on page iii.

Three types of information are necessary to complete the left side of this table. The first blank column with the heading "NUMBER OF SPECIMENS COLLECTED," requires a count for all collected specimens by testing category. It should not include refusals to test. The second blank column with the heading "NUMBER OF SPECIMENS REPORTED NEGATIVE," requires a count for all completed tests by testing category that were reported negative by your Medical Review Officer (MRO).

The third blank column with the heading "NUMBER OF SPECIMENS VERIFIED POSITIVE FOR ONE OR MORE OF THE FIVE DRUGS," refers to the number of specimens provided by job applicants or employees that were verified positive. "Verified positive" means the results were verified by your MRO.

The right hand portion of this table, with the heading "NUMBER OF SPECIMENS VERIFIED POSITIVE FOR EACH TYPE OF DRUG," requires counts of positive tests for each of the five drugs for which tests were done, i.e., marijuana (THC), cocaine, phencyclidine (PCP), opiates, and amphetamines. The number of specimens verified positive for each drug should be entered in the appropriate column for that drug type. Again, "verified positive" refers to test results verified by your MRO.

If an applicant or employee tested positive for more than one drug; for example, both marijuana and cocaine, that person's positive results would be included once in each of the appropriate columns (marijuana and cocaine).

SAMPLE MARINE EMPLOYEE TEST RESULTS TABLE

The following example is for Section C, MARINE EMPLOYEE DRUG TESTING INFORMATION, and summarizes pre-employment testing results. The procedures detailed here also apply to the

other categories of testing in Section C which require you to summarize testing results for employees.

**A** Urine specimens were collected for 157 job applicants for covered positions during the reporting year. This information is entered in the first blank column of the table in the row marked "PRE-EMPLOYMENT".

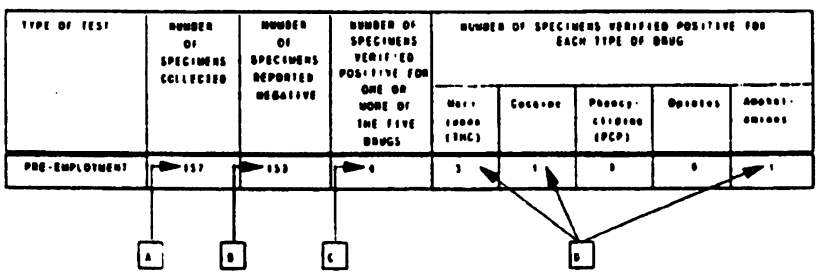
**B** The MRO for your company reported that 153 of those 157 specimens from applicants were negative (i.e., no drugs were detected). Enter this information in the second blank column of the table in the row marked "PRE-EMPLOYMENT".

**C** The MRO for your company reported that 4 of those 157 specimens from applicants were positive (i.e., a drug or drugs were detected). Enter this information in the third blank column of the table in the row marked "PRE-EMPLOYMENT".

**D** With the 4 specimens that tested positive, the following drugs were detected:

| Specimen | Drugs |
|---|---|
| #1 | Marijuana |
| #2 | Amphetamines |
| #3 | Marijuana and Cocaine (Multi-drug specimen) |
| #4 | Marijuana |

Marijuana was detected in three (3) specimens, cocaine in one (1), and amphetamines in one (1). This information is entered in the columns on the right hand side of the table under each of these drugs. Two different drugs were detected in specimen #3 (multi-drug) so an entry is made in both the marijuana and the cocaine column for this specimen.




Note that adding up the numbers for each type of drug in a row ("NUMBER OF SPECIMENS VERIFIED POSITIVE FOR EACH TYPE OF DRUG") will not always match the number entered in the third column, "NUMBER OF SPECIMENS VERIFIED POSITIVE FOR ONE OR MORE OF THE FIVE DRUGS". The total for the numbers on the right hand side of the table may differ from the number of specimens testing positive since some specimens may contain more than one drug.

**Page 2** Below the table for MARINE EMPLOYEE DRUG TESTING INFORMATION is a box with the heading "Number of persons denied a position as a covered employee following a verified positive drug test". This is simply a count of those persons who were not placed in a covered position because they tested positive for one or more drugs.

**Page 2** Also following the table for MARINE EMPLOYEE DRUG TESTING INFORMATION, you must provide counts for employees who have tested positive and have returned to work in a covered position during the reported period. This information should be available from the personnel office and/or drug program manager.

**Page 2** SPECIMENS VERIFIED POSITIVE FOR MORE THAN ONE DRUG requires information on specimens that contained more than one drug. First, indicate the NUMBER OF VERIFIED POSITIVES. Then specify the combination of drugs reported as positive by placing the same number in the appropriate columns. For example, if marijuana and cocaine were detected in 3 specimens, then you would write "3" as the number of verified positives and "3" in the columns for "Marijuana" and "Cocaine". If marijuana and opiates were detected in 2 specimens, then you would write "2" as the number of verified positives and "2" in the columns for "Marijuana" and "Opiates".

**Page 2** EMPLOYEES WHO REFUSED TO SUBMIT TO A DRUG TEST requires a count of the NUMBER OF COVERED EMPLOYEES who refused to submit to a random or non-random (pre-employment, post-accident, or reasonable cause) drug test required under the USCG regulation.

**Page 2** DRUG AND ALCOHOL TRAINING requires information on the number of covered employees and supervisory personnel who have received the required drug and alcohol training during the current reporting period.

The following instructions are to be used as a guide for completing the alcohol testing information for the USCG/DOT Drug and Alcohol Testing MIS Data Collection Form. A sample testing results table with a narrative explanation is provided on page v as an example to facilitate the process of completing the form correctly.

Section D is used to summarize the alcohol testing results for covered employees. There are two categories of testing to be completed in this table. Items necessary to complete this table includes:

1) the number of alcohol tests performed for each testing category; and
2) the number of test results which were equal to or greater than 0.04.

A sample table with detailed instructions is provided.

**Page 2** MARINE EMPLOYEE ALCOHOL TESTING INFORMATION (Section D) requires information for post-accident and reasonable cause alcohol testing. These numbers do not include refusals for testing. A sample table with example numbers is presented on page v.

Two types of information are necessary to complete this table. The first blank column with the heading "NUMBER OF TESTS" requires a count of all alcohol tests performed for each testing category.

The second blank column with the heading "NUMBER OF TEST RESULTS EQUAL TO OR GREATER THAN 0.04" requires a count of positive tests.

SAMPLE MARINE EMPLOYEE TEST RESULTS TABLE

The following example is for Section D, MARINE EMPLOYEE ALCOHOL TESTING INFORMATION, which summarizes post-accident and reasonable cause testing results.

[A] Tests were conducted on 6 employees in covered positions during the reporting year. This information is entered in the first blank column of the table in the row marked "POST-ACCIDENT". The test results for these 6 employees were the following:

| Employee | Results |
|---|---|
| #1 | 0.08 |
| #2 | 0.00 |
| #3 | 0.00 |
| #4 | 0.04 |
| #5 | 0.00 |
| #6 | 0.02 |

[B] The test results for 2 of the employees in covered positions were equal to or greater than 0.04. Enter this information in the second blank column of the table in the row marked "POST-ACCIDENT".

| TYPE OF TEST | NUMBER OF TESTS | NUMBER OF TEST RESULTS EQUAL TO OR GREATER THAN 0.04 |
|---|---|---|
| POST-ACCIDENT | 6 [A] | 2 [B] |
| REASONABLE CAUSE | 10 | 1 |

Please note that the sample data collection form also has information for REASONABLE CAUSE testing on line two. For REASONABLE CAUSE testing, 10 tests were conducted and 1 was equal to or greater than 0.04.

v

USCG DRUG AND ALCOHOL TESTING MIS DATA COLLECTION FORM OMB No. 2115-0003

YEAR COVERED BY THIS REPORT: 19__

A. MARINE EMPLOYER INFORMATION

Company _____

Address _____

_____

_____

I, the undersigned, certify that the information provided on this United States Coast Guard Drug and Alcohol Testing Management Information System Data Collection Form is, to the best of my knowledge and belief, true, correct, and complete for the period stated.

Signature _____ Printed Name _____ Date _____

Title _____ Phone Number _____

Title 18, U.S.C. Section 1001, makes it a criminal offense subject to a maximum fine of $10,000, or imprisonment for not more than 5 years, or both, to knowingly and willfully make or cause to be made any false or fraudulent statements or representations in any matter within the jurisdiction of any agency of the United States.

B. COVERED EMPLOYEES

| COVERED EMPLOYEES | | | | | | |
|---|---|---|---|---|---|---|
| EMPLOYEE CATEGORY | NUMBER OF USCG COVERED EMPLOYEES | NUMBER OF EMPLOYEES COVERED BY MORE THAN ONE DOT OPERATING ADMINISTRATION | | | | |
| | | FAA | FHWA | FRA | FTA | RSPA |
| Crewmembers | | | | | | |

READ BEFORE COMPLETING THE REMAINDER OF THIS FORM:

1. All items refer to the current reporting period only (for example, January 1, 1994 - December 31, 1994).
2. This report is only for testing REQUIRED BY THE UNITED STATES COAST GUARD (USCG):
   - Results should be reported only for employees in COVERED POSITIONS as defined by the USCG drug and alcohol testing regulations.
   - The information requested should only include testing for: marijuana (THC), cocaine, phencyclidine (PCP), opiates, and amphetamines using the standard procedures required by DOT regulation 49 CFR Part 40; and alcohol using the standard procedures required by USCG regulations 33 CFR Part 95 and 46 CFR Parts 4 and 16.
3. Information on refusals for testing should only be reported in the table entitled "EMPLOYEES WHO REFUSED TO SUBMIT TO A DRUG TEST". Do not include refusals for testing in other sections of this report.
4. Do not include the results of any quality control samples submitted to the testing laboratory in any of the tables.
5. Complete all items; DO NOT LEAVE ANY ITEM BLANK. If the value for an item is zero (0), place a zero (0) on the form.

The United States Coast Guard estimates that the average burden for this report form is 31 minutes. You may submit any comments concerning the accuracy of this burden estimate or any suggestions for reducing the burden to: Commandant, U.S. Coast Guard Headquarters (G-MMI); 2100 2nd St., S.W.; Washington, D.C. 20593-0001; OR Office of Management and Budget, Paperwork Reduction Project (2115-0003); Washington, D.C. 20503.

DEPT. OF TRANSP., USCG, CG-5573 (11-93) 1

REVERSE OF CG-5573 (11-89)

This part of the form requires information on VERIFIED POSITIVE and REPORTED NEGATIVE drug tests. These are the results that are reported to you by your Medical Review Officer (MRO).

C. MARINE EMPLOYEE DRUG TESTING INFORMATION

| TYPE OF TEST | NUMBER OF SPECIMENS COLLECTED | NUMBER OF SPECIMENS REPORTED NEGATIVE | NUMBER OF SPECIMENS VERIFIED POSITIVE FOR ONE OR MORE OF THE FIVE DRUGS | NUMBER OF SPECIMENS VERIFIED POSITIVE FOR EACH TYPE OF DRUG | | | | |
|---|---|---|---|---|---|---|---|---|
| | | | | Marijuana (THC) | Cocaine | Phencyclidine (PCP) | Opiates | Amphetamines |
| PRE-EMPLOYMENT | | | | | | | | |
| RANDOM | | | | | | | | |
| POST-ACCIDENT | | | | | | | | |
| REASONABLE CAUSE | | | | | | | | |

| | |
|---|---|
| Number of persons denied a position as a covered employee following a verified positive drug test: | |
| Number of marine employees with a positive drug test result verified by an MRO, who were returned to duty in a covered position, having met the requirements of 46 CFR 16.370 (d) and 46 CFR Part 5: | |

SPECIMENS VERIFIED POSITIVE FOR MORE THAN ONE DRUG

| NUMBER OF VERIFIED POSITIVES | Marijuana (THC) | Cocaine | Phencyclidine (PCP) | Opiates | Amphetamines |
|---|---|---|---|---|---|
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |

| EMPLOYEES WHO REFUSED TO SUBMIT TO A DRUG TEST | Number |
|---|---|
| Covered employees who refused to submit to a random drug test required under USCG regulations: | |
| Covered employees who refused to submit to a non-random drug test required under USCG regulations | |

| DRUG AND ALCOHOL TRAINING | Number |
|---|---|
| Covered employees who have received initial training on the consequences, manifestations, and behavioral cues of drug and alcohol use as required by USCG drug and alcohol testing regulations: | |
| Supervisory personnel who have received initial training on the specific contemporaneous physical, behavioral, and performance indicators of probable drug and alcohol use as required by USCG drug and alcohol testing regulations: | |

D. MARINE EMPLOYEE ALCOHOL TESTING INFORMATION

| TYPE OF TEST | NUMBER OF TESTS | NUMBER OF TEST RESULTS EQUAL TO OR GREATER THAN 0.04 |
|---|---|---|
| POST-ACCIDENT | | |
| REASONABLE CAUSE | | |

2

[CGD 91–019, 58 FR 68279, Dec. 23, 1993]

# APPENDIX C

## POSTACCIDENT TESTING POLICY FOR THE U.S. COAST GUARD MARINE SAFETY OFFICE, PORTLAND, MAINE

U.S. Department of Transportation
United States Coast Guard

Commanding Officer
US. CoastGuard
Marine Safety Office

P.O. Box 108
Portland, ME 04112-01 OS
Phone (207) 780-3251

MAR I 0 1997

COMMANDING OFFICER INSTRUCTION 16722.2

Subj : SERIOUS MARINE INCIDENT CHEMICAL TESTING

Ref: (a) Title 46 Code of Federal Regulations, Part 4
(b) Title 33 Code of Federal Regulations. Part 95
(c) COMDT COGARD Washington DC 151917Z Nov 94, ALDIST 179/94 Post Casualty Chemical Testing
(d) COMDTINST 16000.10, MSM Vol V

1. PURPOSE. This instruction provides guidelines for Investigating Officers and their Field Office Supervisors in ensuring that alcohol and drug (chemical) testing be performed as soon as practicable in a case of a serious marine incident.

2. DISCUSSION. When a marine casualty, discharge of oil, or release of a hazardous substance occurs, the marine employer is required to make a timely, good faith determination as to whether the occurrence is, or is likely to become, a serious marine incident. A marine employer shall require all persons (not limited to crewmembers) onboard the vessel whom the employer determines to be directly involved in a serious marine casualty to be chemically tested for dangerous drugs and alcohol. It is Coast Guard policy that serious marine incident chemical testing be done as soon as practicable to provide useful results for investigative purpose. However, the Coast Guard personnel will not provide urine collection materials or perform as the collection site person.

3. ACTION. All Marine Safety Field Office Supervisors and Investigating Officers shall ensure compliance with the requirements of this instruction.

4 . RESPONSIBILITY

a. Field Office Supervisors and Investigating Officers must be familiar with the requirements in references (a) through (d) and carry them out accordingly.

b. Upon receiving a report of marine casualty, the Field Office Supervisor and Investigating Officer must immediately evaluate the casualty to determine if the case is a serious marine incident or likely to become one. If the accident is or will become a serious marine incident, the Investigating Officer must inform the marine employer and the master of the vessel immediately about the requirement of post casualty chemical testing. The testing must be conducted "AS SOON AS PRACTICABLE AFTER ADDRESSING THE SAFETY CONCERNS OF THE VESSEL. "

c. The Investigating Officer may provide a copy of Post-accident Drug and Alcohol Testing Overview (enclosure 1) and a copy of List of Suggested Collection Sites (enclosure 2) to assist the marine employer if necessary in ensuring timely chemical testing.

d. The Investigating Officer shall follow up with the marine employer to determine when and where the drug and alcohol test will be performed.

e. If the Investigating Officer determines that alcohol testing will be delayed, the nearest Coast Guard Station (enclosure 3) shall be contacted immediately to conduct breath alcohol testing per reference (c). CGDONE(m) Program Guidance states that the Alto-sensor equipment may be better used by stations and other law enforcement units to avoid creditability conflicts during Suspension and Revocation Hearings. However, this testing does not relieve the employer from having the required chemical test for dangerous drugs performed. The Investigating Officer must emphasize to the marine employer that both drug and alcohol testing must be performed as soon as practicable,

f. When responding to a marine incident, the Investigating Officer shall quickly determine who is directly involved with the accident and make observations for signs of alcohol or other intoxicants. Normally, the physical symptoms of people under the influence of alcohol include: the individual's manner (furtive, trying to avoid face to face), disposition (belligerent, threatening) , speech (slurred) , muscular movement (jerky, clumsy) , general appearance (disheveled, glassy eyed) , or behavior (confrontational). The Investigating Officer shall also be aware of the smell of alcoholic beverage on the individual's clothes or breath.

g. The Investigating Officer shall provide the marine employer a Marine Accident Report Form (CG-2692) and a Coast Guard form CG-2692B, Report of Required Chemical Drug and Alcohol Testing Following a Serious Marine Incident.

h. In case of an accident involving a foreign vessel, the shipping agent of the vessel must also be immediately notified of the chemical testing requirement.

i. The Investigating Officer or any other Coast Guard personnel shall not perform as collection site personnel for any chemical testing.

BURTON S. RUSSELL

Encl: (1) Post-accident Drug and Alcohol Testing Requirements
(2) List of Suggested Collection Site for Marine Employers
(3) List of Coast Guard Stations

copy to: CGDONE (m)
DAP I
GP Portland
GP Southwest Harbor

POST ACCIDENT DRUG AND ALCOHOL TESTING REQUIREMENTS

What do the regulations require?

When a marine casualty, discharge of oil, or release of a hazardous substance occurs, the marine employer needs to make a timely, good faith determination as to whether the occurrence is or likely to become a serious marine incident. A marine employer shall require all persons (not limited to crewmembers) on board the vessel(s) whom the employer determines to be directly involved in a serious marine incident to be chemically tested for dangerous drugs and alcohol. 46 CFR 4.06

Who is responsible for the testing?

The marine employer has the ultimate responsibility for ensuring that the requirements of the federal requirements of post-accident testing be carried out. Employees must provide a urine sample for drug testing, and a blood or breath sample for alcohol testing, when directed by their marine employer or any law enforcement officer. 46 CFR 4.06

What is a serious marine incident?

A serious marine incident, as defined by 46 CFR 4.03-2, includes the following events:

1. A discharge of 10,000 gallons or more of oil into navigable waters of the United States, whether or not resulting from a marine casualty.
2. A discharge of a reportable quantity of a hazardous substance into navigable waters or into the environment of the United States, whether or not resulting from a marine casualty.
3. A marine casualty or accident that is required by 46 CFR 4.05-1 to be reported to the Coast Guard which results in any of the following:
   a. One or more deaths;
   b. An injury to any person (including passengers) which requires medical treatment beyond first aid, and, in the case of a person employed on board a commercial vessel, which renders the person unable to perform routine vessel duties;
   c. Damage to property in excess of $100,000.00
   d. Actual or constructive loss of any inspected vessel; or
   e. Actual or constructive total loss of any uninspected, self-propelled vessel of 100 gross tons or more.

How long do I have to collect the sample?

The regulations do not set a specific time limit but require collections "as soon as practicable." They also state that the regulations shall not prevent a person from performing duties in the aftermath of an accident to protect lives, property, or the environment. Each case will be different, however it should be noted evidence of alcohol can leave the body quite quickly.

ENCLOSURE (1)

What if something becomes a serious marine incident a week later?

The marine employer must make a honest decision of whether or not a certain incident is likely to become a serious marine incident. Some information, such as the cost of property damage or the amount of oil spilled, may not be available for days or months. If the employer determines that something is likely to become a serious marine incident, the employer shall determine who was directly involved and order testing. The Coast Guard understands that the employer can honestly fail to predict if an event could become a serious marine incident. Also, an employee often will report that he/she had an accident some time ago and now wants to see a doctor. There is no precise time limit in the regulations to guide an employer as to when it is "too late" to test.

Who is "DIRECTLY INVOLVED" in a serious marine incident?

An individual whose order, action or failure to act is determined to have, or cannot be ruled out as, having caused or contributed to a serious marine incident is "directly involved". A law enforcement officer, such as a Coast Guard officer or a state or local police officer may also determine that a person was directly involved in a serious marine incident. If this happens, the marine employer shall then take all practicable steps to collect the required samples.

Specimen Collection Equipment

Urine collection and shipping kits must be maintained aboard vessels, unless they can be readily obtained within 24 hours of an incident. Inspected vessels certificated for unrestricted ocean routes must have a breath testing device on board to test for alcohol.

Post-Accident Reporting Requirements

A Coast Guard form CG-2692B, Report of Required Chemical Drug and Alcohol Testing Following a Serious Marine Incident, must be submitted to the appropriate Officer in Charge, Marine Inspection following any serious marine incident. This form should be submitted along with a form CG-2692, Report of Marine Incident, Injury or Death, if a CG-2692 is required to be submitted. The drug test results will not always be available when the CG-2692 and CG-2692B are submitted. The marine employer must report the test results, positive or negative, when they receive them.

Acknowledged by: _____ Date: _____ Time: _____
Investigating Officer: _____ Date: _____ Time: _____

...ting your DOT Urine/Oral Testing Program required by 46 CFR 1

| Company Name | Address | City | ST | Zip | Point of Contact | Telephone Number | Fax Number | Lab Used | MRO |
|---|---|---|---|---|---|---|---|---|---|
| Affiliated Health Care | 30 Summer Street Suite 1 | Bangor | ME | 04401 | Jackie Gill | 207-942-3409 | 207-941-0873 | MedExpress Memphis TN | Med Review Charlotte, NC Drug Free Little Rock, AK |
| St. Andrews Hospital | P.O. Box 417 | Boothbay Harbor | ME | 04538 | Marissa Castillo | 207-633-2121 Ext. 371/372 | 207-633-7414 | CompuChem RTC, NC | Dr. Ken Thompson Insight Ocala, FL |
| Occupational Medicine Associates | 323 Marginal Way | Portland | ME | 04101 | Ward Graffam Steven Johnson | 207-773-6707 | 207-773-5745 | CompuChem RTC, NC | Dr. Steven Johnson |
| Center For Health Promotion | 1600 Congress Street | Portland | ME | 04102 | Denise Gay | 207-774-7751 | 207-828-5140 | CompuChem RTC, NC | Dr. Susan Upham Dr. Betsey Buehrer Dr. David Dickison |
| Health Connections | 859 Commercial Street | Rockport | ME | 04856 | Janice Chase | 207-596-7244 | 207-596-0388 | Corning Nat'l Baltimore, MD | Dr. Alice Chartrande |
| EMSI | 778 Main Street | South Portland | ME | 04106 | Beverly Nixon | 207-871-8600 | 207-871-1818 | Corning Clinical San Diego, CA | Greystone Health Sciences |
| Occupational Health Excellence of Maine | 21 Donald B. Dean Drive | South Portland | ME | 04106 | Penny Leask | 207-775-3288 | 207-775-4747 | CompuChem RTC, NC | Dr. William Boucher |
| Occupational Health & Rehabilitation | 600 Southborough Drive | South Portland | ME | 04106 | Mary Kenney Peter Senger | 207-772-3645 | 207-871-7183 | MedExpress Memphis, TN | Dr. Robert Meyer |
| AdMed, Ltd. | 2301 University Drive Bldg 21 | Bismark | ND | 58504-7595 | Kenneth Will | 800-767-5191 | 701-258-2637 | LabOne , Inc. Overland Park, KS | Dr. Bennett Plainfield, IN |
| Compliant Network of New England | 370 Harvey Road | Manchester | NH | 03103 | John Quintal | 603-623-1100 | 603-627-1168 | Clinical Ref Lab Lenexa, KS | Dr. Windler Manchester, NH |
| The Maritime Consortium | P.O. Box 25345 | Alexandria | VA | 22313-0345 | Sara Ross | 800-775-6985 | 800-764-2350 | MedExpress Memphis, TN | Dr. Ken Thompson Insight Ocala, FL |
| Drug Testing Consultants | P.O. Box 706 | Fairfax | VA | 22030-0706 | Robert Schoening | 800-944-8378 | 703-352-7124 | Occ Med Assoc | Dr. Ian McDonald |

Prepared by Enforcement & Analysis 2/26/97

Page 1

ENCLOSURE ( 2 )

**LIST OF COAST GUARD STATIONS IN THE COTP PORTLAND AOR**

| | |
|---|---|
| USCG Station Boothbay Harbor, ME | (207) 633-2664<br>(207) 633-2661 (SAR) |
| USCG SARDET Eastport, ME | (207) 853-2845 (SAR) |
| USCG Station West Jonesport, ME | (207) 497-2134<br>(207) 497-5700 (SAR) |
| USCG Station Portsmouth Harbor, NH | (603) 436-4415<br>(603) 436-4414 (SAR) |
| USCG Station Rockland, ME | (207) 596-6667<br>(207) 596-6666 (SAR) |
| USCG Station South Portland, ME | (207) 767-0363<br>(207) 767-0364 |

ENCLOSURE (3)

# APPENDIX D

# PORTLAND BOARD OF HARBOR COMMISSIONERS DRUG AND ALCOHOL POLICY

**BOARD OF HARBOR COMMISSIONERS**
**for the HARBOR of PORTLAND**

Pilot Alcohol and Drug Policy Testing Procedures

Adopted December 12, 1996

## 1.0 POLICY STATEMENT

1.1 It is the intent of this policy to assure compliance with Federal and State laws and regulations regarding drug and alcohol testing of pilots licensed by the Board of Harbor Commissioners for the Harbor of Portland (the "Board") to operate or provide service to vessels in the Harbor of Portland (the "Harbor").

1.2 The Board has a strong commitment to the health, safety and welfare of all persons working, traveling or recreating in or near the Harbor. Therefore the Board seeks to license pilots who are free of illegal and abused drugs and alcohol, and protect pilots and the public from the adverse effects of alcohol and drug abuse. The Board also seeks to protect the reputations of pilots against unfounded allegations of substance abuse.

The Board requires applicants seeking pilot's licenses to undergo an alcohol and drug test to detect the presence of alcohol and drug abuse substances in the body. Any applicant with a positive pre-license test maybe denied a license by the Board by reason of the positive test.

1.3 Studies indicate that the use and misuse of alcohol or drugs, whether prescribed or illegal, impairs the ability of a pilot to perform assigned duties, particularly those involved in safety sensitive operations, and may endanger the pilot, co-workers, the public, and public and private property. The Board seeks to prevent pilots from using alcohol and drugs when the use of such is illegal or in any way endangers the public.

## 2.0 DRUG AND ALCOHOL TESTING

2.1 All applicants for pilot's license shall be required to pass a drug and alcohol test as a prerequisite to being granted a license

2.2 Pilots shall remain free from the abuse of alcohol and controlled substances. A pilot maybe tested at any time while on duty, or immediately before or after being on-duty, based on the following:

2.2.1 Reasonable suspicion that the pilot (see definition, reasonable suspicion):

2.2.1.1 has unlawfully used illicit drugs and/or abused controlled substances; or

2.2.1.2 has reported for work under the influence of or has illicitly ingested controlled substances or alcohol during work hours.

2.2.2 Post-Accident following involvement in a piloting accident as defined in section 5.10 below.

2.2.3 Random selection equivalent to that mandated under 49 CFR.

2.2.4 Returning to duty following a confirmed positive test. (see section 5.11 and 5.12)

## 3.0 RESPONSIBILITY

It is the responsibility of the Board to administer and enforce this policy and the procedures as outlined. An offer of employment by the Board for a position classifying as a "pilot" under this policy shall not be deemed to be final, nor shall a prospective employee have the right to accept any offeror suggestion of an offer of employment until such time as a drug test evaluation has been received and cleared by the Board. Any work performed by an individual for or in behalf of the Board prior to such approval shall not involve the operation of any Board vessel prior to testing. Any applicant for a pilot's license issued by the Board shall submit results of drug and alcohol tests as a prerequisite for issuance of a license.

The Board will contract for specimen collection, medical review and testing. It is the responsibility of the Board to see that employees and licensees have notice of and are familiar with these drug and alcohol policies and procedures.

## 4.0 DEFINITION(S)

4.1 Alcohol and Drug Test - A generally accepted and proven test methodology or methodologies as recommended by the Rules and Regulations under CFR 49 Part 653, Prevention of Prohibited Drug Use in Transit Operations and CFR 49 Part 382, Substances and Alcohol Use and Testing, and 49 CFR Part 40, Procedures for Transportation Workplace Drug Testing Programs. This test method determines whether an individual has ingested or otherwise used the substance in question within a period of time before the test.

4.2 Breath Alcohol Technician (BAT) - Professional trained and certified in the use of an evidential breath testing device (EBT).

4.3 Applicant - A person who has applied to the Board for a pilot's license, including current pilots applying for re-licensing.

4.4 Medical Review Officer (MRO) - Physician responsible for reviewing all test results for confirmation prior to communicating same to the Board. The MRO must protect the confidentiality of the individual involved.

4.5 NIDA - The National Institute on Drug Abuse (also known as Substance Abuse and Mental Health Services Administration, or SAM HSA), or other successor agency.

4.6 Pilot - Any person licensed by the Board of Harbor Commissioners, including State licensed bar pilots and State licensed docking masters, and also including Board of Harbor Commissioners staff operating any Harbor Commission patrol vessel

4.7 Positive Test - Alcohol and Drug tests results that meet or exceed the standards outlined under 49 CFR.

4.8 Random Testing - A scientific method used to select pilots for testing at random. This method will be performed throughout the year, and will involve the annual testing of a minimum of 50% for drugs and 25% for alcohol of a pool that includes all pilots, as that term is defined in this policy, with the individuals tested being selected at random. The minimum percent to be tested may decrease in subsequent years based upon the number of confirmed positive test results.

4.9 Reasonable suspicion - A belief based on specific facts and reasonable inferences drawn from those facts that a pilot is under the influence of drugs or alcohol to the extent that job performance maybe impaired or the ability to perform the job safely may be reduced. Circumstances which constitute a basis for determining "reasonable suspicion" may include, but are not limited to:

4.9.1 a pattern of abnormal or erratic behavior;

4.9.2 information provided by a reliable and credible source, and confirmed by a second reliable and credible source;

4.9.3 direct observation of drug or alcohol use;

4.9.4 presence of the physical symptoms of drug or alcohol use (i.e., glassy or bloodshot eyes, alcohol odor on breath, slurred speech, poor coordination and/or reflexes).

4.10 Substance Abuse - The use of alcohol, prescription or over the counter drugs, any of which impairs the ability of a pilot to perform the job safely and effectively, or the use of illegal drugs or other controlled substances without a valid prescription.

## 5.0 PROCEDURE(S) FOR TESTING

5.1 Drugs to be Tested For:

When chemical drug and alcohol screening is required under the provisions of this policy, a breath test and/or urinalysis test will be given to detect the presence of the following drug groups:

5.1.1 Alcohol (ethyl)

5.1.2 Amphetamines

5.1.3 Cocaine

5.1.4 Opiates

5.1.5 Phencyclidine (PCP)

5.1.6 THC (Marijuana)

5.1.7 Other substances as required by applicable federal or state law

5.2 Testing Techniques

5.2.1 Drug Testing: Drug testing is accomplished by analyzing the pilot's urine specimen (urinalysis). Specimens will be collected at an off-site facility selected by the Board. The testing facility must assure that specimen collection be done in a dignified, professional and confidential manner. Once the pilot provides a urine specimen, it is sealed and labeled by a certified/authorized agent of the testing facility. A chain of custody document is completed in the presence of the employee, and the specimen is shipped to a SAMHSA certified laboratory.

All urinalysis procedures are required to include split-specimen techniques. Each urine sample is subdivided into two containers and labeled as primary and split specimens. Both specimens are forwarded to the laboratory. Only the primary specimen is used in the urinalysis. In the event of a confirmed positive test result, the split specimen may be used for a second confirmation test if requested by the pilot.

During testing an initial screening testis performed. If the testis positive for one or more drugs, a confirmation test will be performed for each individual drug using gas chromatography/mass spectrometry (GC/MS) analysis. This test ensures that over the counter medications are not reported as positive results.

If the analysis of the primary specimen results in a confirmed positive test, the pilot may within 72 hours request that the split specimen also be tested at the SAMHSA laboratory of his choice. The second test is at the pilot's expense unless the test results are negative, in which **case** the Board shall reimburse the pilot.

All test results are reviewed by a physician Medical Review Officer (MRO) prior to results being reported to the Board. In the event of a positive test result, the MRO will first contact the pilot via telephone and conduct an interview to determine if there are any alternative legitimate reasons for the positive result (such as over-the-counter or prescription medications). If the MRO determines there is a legitimate medical explanation for the presence of drugs, the result will be reported as negative.

5.2.2 Alcohol Testing: Alcohol testing will be conducted using an evidential breath testing (EBT) device. The test breath must be performed by a certified Breath Alcohol Technician (BAT) trained in the use of the EBT and alcohol testing procedures. Post-accident tests conducted by law enforcement personnel will be acceptable.
Two (2) breath tests are required to determine if an individual is over the alcohol concentration limit permitted. Any result of less that 0.02 concentration is considered a negative result. Any result of greater **that 0.02** requires a confirmation test. A confirmed test of 0.04 or greater is considered a positive result.

5.3 Applicant Testing: General Standard

Applicants for pilot's licenses will be required to undergo a chemical drug and alcohol test before being licensed.

5.4 Current Pilot Testing: General Standard

5.4.1 The Board may require a currently licensed pilot to undergo drug and alcohol testing if there is reasonable suspicion by the Board that the pilot is under the influence of drugs or alcohol during work hours.

5.4.2 The Board is required to document the specific facts, symptoms, or observations which formed the basis that reasonable suspicion existed or did not exist to warrant the testing of a pilot.

5.4.3 The Board shall require a currently licensed pilot to undergo post-accident drug and alcohol testing if the pilot is involved in a work-related serious marine incident as that term is defined in 45 CFR §4.03-2 and applied to the United States Coast Guard.

5.4.4 All current and future pilots shall be subject to Random Testing,

5.4.5 Pilots having had a confirmed positive test will be subject to re-testing at the time they return to work. After returning to work, they will be subject to follow-up testing without notice for up to 60 months.

5.5 Prior Notice of Testing Policy

The Board shall provide written notice of its drug and alcohol testing policy to all pilots who are subject to the policy and all applicants. The notice shall contain the following information:

5.5.1 the need for drug and alcohol testing;

5.5.2 the circumstances under which testing may be required;

5.5.3 the procedure for confirming an initial positive drug test result;

5.5.4 the consequences of a confirmed positive test result and the appeal procedures available;

5.5.5 the consequences of refusing to undergo a drug and alcohol test;

5.5.6 the right to explain a positive test result and the appeal procedures available; and

5.5.7 the availability of drug abuse counseling and referral services.

5.6 Notice and Consent

Before a drug and alcohol testis administered, pilots and will be asked to sign a consent form authorizing the test and permitting the release of test results to the Board. The chemical screen consent form shall provide space to indicate current or recent use of prescription and over-the-counter medication.

5.7 Applicant Testing

Before the Board may grant a pilot's license, the applicant must show proof of a negative drug test and a negative alcohol screening test.

5.8 Reasonable Suspicion Testing.

Any Board member, employee or pilot receiving information indicating a reasonable suspicion of substance abuse by a pilot shall refer the information to the United States Coast Guard. In the event the United States Coast Guard performs reasonable suspicion testing of any pilot required to comply with this Policy, the pilot shall cause the results of the test to be provided to the MRO, who, after confirmation, will forward them to the Board.

5.9 Random Testing

Random testing shall be performed quarterly or more frequently throughout the year, and shall initially involve testing a minimum of 50% for drugs and 25% for alcohol per year of a pool that includes all pilots. The pilots tested shall be selected at random and the tests shall be unannounced. Random testing of pilots shall be conducted only during the onduty hours of the pilot being tested or immediately before or after being on-duty.

5.10 Post-Accident Testing

Post-accident drug and alcohol testing will be conducted on any pilot involved in a work-related serious marine incident as that term is defined in 46 CFR $4.03-2 and applied to the United States Coast Guard. In the event the United States Coast Guard performs post-accident testing of any

pilot required to comply with this Policy, the pilot shall cause the results of the test be provided to the MRO, who, after confirmation, will forward them to the Board. A police officer from the City of Portland or South Portland may perform the test and provide the results to the MRO, who, after confirmation, will forward them to the Board.

5.11 Return-To-Duty Testing

Any pilot returning to duty following a confirmed positive test must be subjected to a return-to-duty test following the same guidelines described in section 5.6. The test must show a verified negative result prior to the employee returning to duty.

5.12 Follow-Up Testing

5.12.1 A pilot returning to work following a confirmed positive test shall be subject to unannounced follow-up testing for a period of not less than 12 months and not more than 60 months. A mandatory minimum of six (6) tests any time during the first twelve (12) months is required. Pilots subject to follow-up testing must also remain in the random pool.

5.12.2 Follow-up tests may be used to determine whether or not the drug is still being used.

5.13 Refusal to Consent: Applicants

An applicant who refuses to consent to a drug and alcohol screening test will be denied a license.

5.14 Refusal to Consent: Pilots

A pilot who refuses to consent to a drug and alcohol screening test when selected for random testing, or when reasonable suspicion of drug and alcohol use has been identified, is subject to license suspension or revocation The reason(s) for the refusal shall be considered in determining the appropriate disciplinary action.

5.15 Confirmation of Chemical Test Results

5.15.1 A pilot or job applicant whose drug test yields a positive result, confirmed by the MRO, will be given a second test. The second test will use a portion of the same test sample withdrawn from the pilot for use in the first test.

5.15.2 If the second test confirms the positive test result, the pilot will be notified of the results by the MRO, who will offer the pilot an opportunity to discuss the results. The MRO will then notify the Board of the results in writing. The letter of notification shall identify the particular substance found and its concentration level.

5.16 Consequences of a Confirmed Positive Test Result

5.16.1 Applicants: Applicants will be denied licenses if their initial positive test results have been confirmed.

5.16.2 Pilots: If a pilot's positive test result has been confirmed, the Board shall suspend or revoke the license.

5.17 Confidentiality of Test Results

5.17.1 All information from a pilot's or applicant's drug and alcohol testis strictly confidential. Disclosure of test results to any other person, agency or organization is prohibited unless written authorization is obtained from the pilot or applicant, or unless disclosure is required by a superseding law or in accordance with the exceptions listed in 5.17.2 below. The results of a positive drug test shall not be released by the MRO to the Board until confirmed. The records of unconfirmed positive test results and negative test results shall be destroyed by the testing laboratory. All positive test results will be maintained by the MRO, and reported to the Board, where they will be kept on file.

5.17.2 Exceptions to these confidentiality provisions are limited to a decision maker in arbitration, litigation, or administrative proceedings arising out of a positive drug or alcohol test or other violation of these rules.

5.18 Privacy in Chemical Testing

5.18.1 Urine samples shall be provided in a private rest room stall or similar enclosure so that pilots may not be viewed while providing the sample. Street clothes, bags, briefcases, purses, and other containers shall not be carried into the test area. The water in the commode, if any, shall be colored with dye to protect against dilution of test samples.

5.18.2 An applicant or employee may waive the right to privacy and provide the urine sample in the presence of a witness (of the same gender) and not be required to disrobe and wear a hospital gown.

5.19 Laboratory Testing Requirements

5.19.1 All chemical drug and alcohol testing of pilots and applicants shall be conducted at medical facilities or laboratories selected by the Board pursuant to this Policy, with the exception of a breath test for alcohol performed by a South Portland or Portland police officer, which maybe conducted at a police station. To be considered as a testing site, a medical facility or lab must submit in writing a description of the procedures that will be used to maintain test samples. Factors to be

considered by the Board in selecting a testing facility include in addition to NIDA (SAMHSA) certification:

5.19.1.1 Testing procedures which ensure privacy to pilots consistent with the prevention of tampering;

5.19.1.2 Methods of analysis which ensure reliable test results, including the use of gas chromatography/mass spectrometry to confirm positive test results;
5.19.1.3 Chain-of-custody procedures which ensure proper identification, labeling and handling of test samples; and

5.19.1.4 Retention and storage procedures which ensure reliable results on confirmatory tests of original samples.

5.20 Second Confirmation Test

5.20.1 The pilot may request from the MRO a second confirmation test of the same sample within 72 hours of notice that the first test was positive.

5.20.2 The cost of the second confirmation test must be paid in advance by the pilot. If the testis negative, the Board shall reimburse the pilot for the cost of the test.

5.20.3 The second confirmation test will be performed by a NIDA (SAMHSA) certified laboratory selected by the pilot.

**BOARD OF HARBOR COMISSIONER FOR THE HARBOR OF PORTLAND**
**Pilot Breath Teat &/or Urinalysis Consent Form**

The Board of Harbor Commissioners for the Harbor of Portland ("Board") has a strong commitment to the health, safety and welfare of all persons in or near the Harbor. Use and misuse of alcohol or drugs, whether prescribed or illegal, impairs the ability of a pilot to perform necessary and essential duties related to the piloting of vessels, and may endanger the pilot, co-workers, the public, and public and private property. The Board seeks to prevent pilots from using alcohol and drugs when the use of such is illegal, or in any way endangers the public. The Board also seeks to protect the reputations of pilots against unfounded allegations of substance abuse.

The Board may require a currently licensed pilot to undergo drug and alcohol testing consisting of: random testing; post-accident testing; reasonable suspicion and follow-up testing. Refusal to be tested may subject a pilot to license suspension or revocation.

I CONSENT TO BREATH TESTS AND URINE SAMPLE COLLECTION AND TESTING FOR ALCOHOL AND CONTROLLED SUBSTANCES.

I UNDERSTAND THAT A POSITIVE TEST RESULT WILL RENDER ME UNQUALIFIED TO OPERATE A VESSEL IN THE HARBOR AND MAY RESULT IN SUSPENSION OR REVOCATION OF MY LICENSE.

THE MEDICAL REVIEW OFFICER CONTRACTED BY THE BOARD WILL MAINTAIN THE RESULTS OF MY TEST. NEGATIVE AND POSITIVE RESULTS WILL BE REPORTED TO THE BOARD. IF THE RESULTS ARE POSITIVE, THE CONTROLLED SUBSTANCE WILL BE IDENTIFIED. THE RESULTS WILL NOT BE RELEASED TO OTHER PARTIES WITHOUT MY WRITTEN CONSENT.

I UNDERSTAND THE ABOVE CONDITIONS AND HEREBY AGREE TO COMPLY WITH THEM.

Test(s) to be administered (check appropriate test(s)):

_ Urinalysis for drug use

_ Breath test for alcohol use

_____ _____
Pilot's name (please print) Date

_____ _____
Pilot's signature Social security number

# APPENDIX E
# ACROSS-AGENCY SUMMARY OF FEDERAL POSTACCIDENT TESTING REGULATIONS

| Agency/applicable CFR | Required specimens | Responsible for test | Timeliness requirements | Penalties for noncompliance |
|---|---|---|---|---|
| **USCG**<br>46 CFR 4<br>46 CFR 16<br><br>33 CFR 95 | Blood or breath or both; urine<br><br>Breath, blood, urine, and saliva or other bodily fluids or tissues | Employer or law enforcement officer | A | ▪ $1,000 per violation, per day until violation corrected.<br><br>▪ FY 99 USCG reauthorization proposes increase to $5,000. |
| **FRA**<br>49 CFR 219 | Blood and urine; breath | Employer | A, B, C | ▪ Schedule of penalties at 49 CFR 219, Appendix A.<br>▪ Fines range from $5,000 to $10,000 depending upon the offense. |
| **FHWA**<br>49 CFR 382<br>49 CFR 391 | Breath and urine | Employer | A, D, E, F | ▪ Penalties applied according to 49 U.S.C. 521b. |
| **RSPA**<br>49 CFR 199 | Breath and urine | Employer | A, D, E, G | ▪ Civil penalties at 49 CFR 190.223. Maximum fine of $25,000 per day, per offense up to $500,000.<br><br>▪ Criminal penalties include $25,000 fine or imprisonment not to exceed 15 years or both. |
| **FTA**<br>49 CFR 653<br>49 CFR 654 | Breath and urine | Employer | A, D, E ,G | ▪ Suspension of grantee's eligibility for Federal and State funding.<br><br>▪ Criminal violations applied according to 18 U.S.C. 1001. |
| **FAA**<br>14 CFR 121 | Breath and urine | Employer | A, D, E, G | ▪ Revocation of employer certification. |

**Timeliness Requirements**

**A**—As soon as practicable after accident, test for alcohol and drugs.
**B**—If no alcohol or drug testing performed within 4 hours, record why not promptly done.
**C**—If no alcohol or drug testing performed within 8 hours of notifying supervisor of the accident, cease attempts to test.
**D**—If no alcohol testing performed within 2 hours, record why not done.
**E**—If no alcohol testing performed within 8 hours, cease attempts to test and record why not done.
**F**—If no drug testing performed within 32 hours, cease attempts to test and record why not done.
**G**—Obtain drug test no later than 32 hours after accident.

**Exhibit B**

**Calendar No. 466**

105th Congress
2d Session

SENATE

REPORT
105–246

# COAST GUARD AUTHORIZATION ACT FOR FISCAL YEARS 1998 AND 1999

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## R E P O R T

OF THE

## COMMITTEE ON COMMERCE, SCIENCE, AND TRANSPORTATION

on

## S. 1259

JULY 10, 1998—Ordered to be printed

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U.S. GOVERNMENT PRINTING OFFICE
59–010 WASHINGTON : 1998

SENATE COMMITTEE ON COMMERCE, SCIENCE, AND TRANSPORTATION

ONE HUNDRED FIFTH CONGRESS

SECOND SESSION

JOHN McCAIN, Arizona, *Chairman*

| | |
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**Calendar No. 466**

105TH CONGRESS, 2d Session | SENATE | REPORT 105–246

# COAST GUARD REAUTHORIZATION ACT FOR FISCAL YEARS 1998 AND 1999

JULY 10, 1998.—Ordered to be printed

Mr. MCCAIN, from the Committee on Commerce, Science, and Transportation, submitted the following

## REPORT

[To accompany S. 1259]

The Committee on Commerce, Science, and Transportation, to which was referred the bill (S. 1259) "A Bill to authorize appropriations for fiscal years 1998 and 1999 for the United States Coast Guard, and for other purposes", having considered the same, reports favorably thereon with amendments and recommends that the bill (as amended) do pass.

### PURPOSE OF THE BILL

S. 1259, the Coast Guard Authorization Act for Fiscal Years 1998 and 1999, authorizes appropriations for the U.S. Coast Guard for fiscal year (FY) 1998 and FY 1999, covering six appropriations accounts: (1) operation and maintenance expenses; (2) acquisition, construction, and improvement of facilities and equipment (AC&I); (3) research, development, testing, and evaluation (RDT&E); (4) retired pay; (5) alteration or removal of bridges; and (6) environmental compliance and restoration. The bill also authorizes end-of-year military strength and training loads, strengthens requirements for post-incident alcohol testing, establishes sanctions for obstructing law enforcement related to vessel boardings and aircraft landings, and makes other changes to existing law.

### BACKGROUND AND NEEDS

The Coast Guard is the principal Federal maritime safety and law enforcement agency. Coast Guard activities include vessel safety inspection, the rescue of life and property at sea, fisheries law

enforcement, marine environmental protection, and the interdiction of drug traffickers and alien migrants. In addition, the agency carries out port security functions, cooperates closely with the other armed forces in military readiness activities, and has primary responsibility for the coastal defense of the United States. During times of war and national emergency, the Coast Guard becomes an arm of the U.S. Navy.

The Coast Guard Authorization Act of 1996 (Public Law 104–324) authorized appropriations and levels of military strength and training for the Coast Guard for FY 1996 and FY 1997. S. 1259 would authorize appropriations and levels of military strength and training for the Coast Guard in the two succeeding fiscal years and make other changes to existing law to address issues related to the Coast Guard.

## FY 1998 AND 1999 ADMINISTRATION BUDGET REQUEST

For FY 1998, the Administration requested a budget of approximately $4.0 billion for the Coast Guard, an increase of $146 million or 4 percent over FY 1997 funding levels. The Administration also requested a budget of approximately $4.1 billion for FY 1999, an approximately 6 percent increase from the amount available in FY 1997. In addition, it requested an end-of-year strength of 36,469 active duty military personnel in FY 1998, and an end-of-year strength of 35,538 active duty military personnel in FY 1999. Coast Guard budget accounts that are authorized in S. 1259 are summarized below.

### *Operating expenses*

More than two-thirds of the total Coast Guard budget supports the operating expenses account, which funds activities to protect public safety and the marine environment, enforce laws and treaties, maintain aids to navigation, and preserve defense readiness. The Administration requested $2.74 billion for this account in FY 1998, an increase of $122 million from the FY 1997 appropriated level. For FY 1999, the Administration requested $2.77 billion. In each fiscal year, the request assumes that $25 million would be transferred from the Oil Spill Liability Trust Fund to the operating expenses account and that approximately $300 million would be available from the Department of Defense (DOD) for defense-related activities.

### *Acquisition, construction, and improvements*

AC&I funds are used to pay for major capital improvements, including vessel and aircraft acquisition and rehabilitation, information management, and construction programs at selected facilities. Major AC&I projects include replacement of seagoing and coastal buoy tenders, motor lifeboats, and coastal patrol boats; improvement of fleet logistics systems; the icebreaker program; surface search radar replacement; aircraft collision avoidance upgrades; and communications and computer software systems. The Administration requested $379 million for AC&I in FY 1998, an increase of $4.2 million over the appropriated level for FY 1997. In FY 1999, the Administration requested $408 million. In each fiscal year, the request assumes that $20 million would be transferred from the Oil

Spill Liability Trust Fund to the AC&I account. The FY 1999 request assumes that an additional $35 million will be available in commercial navigation user fee receipts, bringing proposed AC&I expenditures to a total of $443 million.

*Research, development, test, and evaluation*

Funds from this account are used to develop hardware, procedures, and systems that directly contribute to increasing the productivity of Coast Guard operating and regulatory programs. The Administration requested $19 million for this account in FY 1998, a decrease of $200,000 from the appropriated level for FY 1997. The Administration requested $18.3 million for this account in FY 1999. In each fiscal year, the request assumes that $3.5 million would be transferred from the Oil Spill Liability Trust Fund to this account.

*Retired pay*

Funds from this account are used for retired pay, annuities, and medical care for retired military personnel and former Lighthouse Service members, their dependents, and their survivors under chapter 55 of title 10, United States Code. The Administration requested $645.7 million in FY 1998, an increase of $28.9 million over the appropriated level for FY 1997. For FY 1999, the Administration requested $684 million for retired pay.

*Alteration of bridges*

Under the Truman-Hobbs Act, the Federal government shares with the states the cost of altering publicly-owned highway and railroad bridges that obstruct the free movement of marine traffic. Since FY 1995, the Administration has requested no funding for highway bridge modifications, initiating a policy under which the Coast Guard no longer would seek direct funding for such bridges. Instead, the Administration proposes that the federal share be financed from the discretionary bridge program funds of the Federal Highway Administration, under the continuing program direction of the Coast Guard. The 1996 Coast Guard authorization law (P.L. 104–324) provided the Administration with discretionary authority to implement this proposal. In addition, $17 million was included in the FY 1998 appropriations bill for the Coast Guard account. Now, the Administration has indicated interest in expanding the Federal Highway Administration's discretionary funding authority to include Truman-Hobbs railroad bridges. The Administration did not request Coast Guard funding for Truman-Hobbs Act projects in FY 1998 and FY 1999.

*Environmental compliance and restoration*

This account provides resources to bring current and former Coast Guard facilities into conformance with national environmental standards. The Administration requested $21 million for both FY 1998 and FY 1999, a decrease of $1 million from the appropriated level for FY 1997.

AUTHORIZATION REQUESTS

The authorization bill transmitted by the Administration proposes various changes to existing law to address issues and problems identified by the Coast Guard. These requests include legislation to remove the cap on warrant officer severance pay; allow the use of appropriated funds for the rental or lease of commercial vehicles to transport next-of-kin of eligible retired Coast Guard personnel to military funerals at national cemeteries; provide reimbursement to the City of Novato, California, for the cost of revising the Hamilton Reuse Planning Authority's closed base reuse plan; eliminate the Coast Guard Supply Fund reimbursement requirement; permit the funding of certain awards programs; protect personal information collected in marine casualty investigations from mandatory release; eliminate a biennial research and development reporting requirement; and extend the territorial sea for the purposes of certain Federal laws.

LEGISLATIVE HISTORY

On March 18, 1997, the Committee held a hearing on the Administration's budget request for FY 1998 and on draft legislation to authorize Coast Guard programs and activities for FY 1998 and FY 1999. In addition to reviewing the Administration's budget priorities for the Coast Guard, the hearing addressed drug interdiction, alcohol and drug testing after serious marine incidents, fisheries law enforcement, marine pollution prevention, Coast Guard personnel issues, funding mechanisms for bridge alterations, and recreational boating safety.

S. 1259 was introduced on October 6, 1997, by Senator Snowe, with Senators Hollings and Breaux as cosponsors. On October 8, 1997, the bill was considered by the Committee in an open executive session. Senator McCain offered an amendment intended to enhance the effectiveness of drug interdiction and other law enforcement efforts of Federal law enforcement agencies like the Coast Guard. Specifically, the McCain amendment would establish criminal sanctions for an airplane pilot to knowingly disobey an order to land from a Coast Guard or other law enforcement officer or for a vessel captain to knowingly disobey an order to stop or slow down to facilitate boarding by the Coast Guard or other authorized Federal law enforcement agency. The amendment would also establish criminal sanctions for non-forcible obstruction of a vessel boarding and for knowingly providing false information about a vessel and its cargo to a Federal law enforcement officer during a boarding of that vessel. The McCain amendment was adopted by voice vote, and the Committee, without objection, ordered S. 1259 reported with amendments.

SUMMARY OF MAJOR PROVISIONS

*Authorization levels*

S. 1259 as reported authorizes appropriations for the Coast Guard accounts covered in the bill that total $3.83 billion in FY 1998 and $3.86 billion in FY 1999. The authorization levels in the bill are generally consistent with the Administration's proposed au-

thorization bill. However, the numbers do not reflect the FY 1999 budget request that was transmitted after the Committee approved S. 1259 as reported. The reported bill also authorizes FY 1998 and FY 1999 end-of-year active duty military strength and annual training levels at Administration-requested levels.

*Personnel management*

The reported bill provides the Secretary of Transportation (Secretary) with the discretionary authority to waive severance pay requirements for officers separated with an other than honorable discharge, and it removes the statutory cap on severance pay for regular Coast Guard warrant officers.

*Alcohol testing*

The bill as reported requires the Coast Guard to ensure that alcohol testing of appropriate persons involved in a serious marine incident is conducted promptly after such an incident occurs. The bill also increases the maximum civil penalties for failure to comply with Coast Guard alcohol and drug testing requirements and for the first violation of Federal rules prohibiting the operation of a vessel while intoxicated.

*Penalty for violation of international safety convention*

The reported bill prohibits a vessel which has been detained by the Secretary for violation of an international safety convention to which the United States is a party from carrying cargo sponsored by the United States government. This prohibition expires one year after the date of the vessel's detention or upon the Secretary granting an appeal of the detention upon which the prohibition is based.

*Extension of territorial sea for certain laws*

The reported bill extends the territorial sea definitions in the Ports and Waterways Safety Act and subtitle II of title 46, United States Code, from 3 to 12 nautical miles from the U.S. baselines. The extensions conform these laws with Presidential Proclamation 5928 of December 27, 1988, which was issued by President Reagan and which extended the U.S. territorial sea from 3 to 12 nautical miles.

*Sanctions for failure to land or bring to*

The reported bill establishes criminal sanctions for failure by a person in charge of an aircraft to obey an order to land issued by an authorized Federal drug law enforcement officer and for failure by a person in charge of a vessel to obey an order issued by an authorized Federal law enforcement officer to "bring to" that vessel (i.e., to enable law enforcement to board the vessel). The amendment also establishes criminal sanctions for obstruction of a vessel boarding and for providing false information about a vessel and its cargo to a Federal law enforcement officer during a boarding of that vessel.

## ESTIMATED COSTS

In accordance with paragraph 11(a) of rule XXVI of the Standing Rules of the Senate and section 403 of the Congressional Budget

Act of 1974, the Committee provides the following cost estimate, prepared by the Congressional Budget Office:

U.S. CONGRESS,
CONGRESSIONAL BUDGET OFFICE,
*Washington, DC, November 13, 1997.*

Hon. JOHN MCCAIN,
*Chairman, Committee on Commerce, Science, and Transportation, U.S. Senate, Washington, DC.*

DEAR MR. CHAIRMAN: The Congressional Budget Office has prepared the enclosed cost estimate for S. 1259, the Coast Guard Authorization Act for Fiscal Years 1998 and 1999.

If you wish further details on this estimate, we will be pleased to provide them. The CBO staff contacts are Deborah Reis (for federal costs), Kristen Layman (for the state and local impact), and Jean Wooster (for the impact on the private sector).

Sincerely,

JAMES L. BLUM
(For June E. O'Neill, Director).

Enclosure.

CONGRESSIONAL BUDGET OFFICE COST ESTIMATE

*S. 1529—Coast Guard Authorization Act for Fiscal Years 1998 and 1999*

Summary: S. 1529 would authorize appropriations for discretionary programs of the U.S. Coast Guard (USCG) for fiscal years 1998 and 1999. For both years, the bill would authorize about $3.2 billion, including about $2.7 billion for operating expenses, $379 million for acquisition and other capital projects. $19 million for research activities, $26 million for bridge alterations, and $21 million for environmental compliance. Of the amounts authorized for each year, $48.5 million would be derived from the Oil Spill Liability Trust Fund (OSLTF).

S. 1259 contains no new intergovernmental or private-sector mandates as defined in the Unfunded Mandates Reform Act of 1995 (UMRA) and would impose no significant costs on state, local, or tribal governments.

Two provisions of the bill could increase federal revenues from civil penalties; therefore, pay-as-you-go procedures would apply. The budgetary effect of these provisions, however, would be negligible.

Estimated cost to the Federal Government: Assuming appropriation of the entire amounts authorized for discretionary programs, funding for both 1998 and 1999 would be $24 million (less than 1 percent) more than has been enacted for 1998. The estimated budgetary effects of the legislation are summarized in the following table.

| | By fiscal year, in millions of dollars— | | | | | |
|---|---|---|---|---|---|---|
| | 1997 | 1998 | 1999 | 2000 | 2001 | 2002 |
| SPENDING SUBJECT TO APPROPRIATION | | | | | | |
| USCG Spending Under Current Law: | | | | | | |
| Estimated Authorization Level [1] | 3,052 | 3,161 | 29 | 0 | 0 | 0 |

| | By fiscal year, in millions of dollars— | | | | | |
|---|---|---|---|---|---|---|
| | 1997 | 1998 | 1999 | 2000 | 2001 | 2002 |
| Estimated Outlays | 2,807 | 3,092 | 893 | 464 | 136 | 63 |
| Proposed Changes: | | | | | | |
| Estimated Authorization Level | 0 | 24 | 3,156 | 0 | 0 | 0 |
| Estimated Outlays | 0 | 20 | 2,251 | 444 | 344 | 81 |
| USCG Spending Under S. 1259: | | | | | | |
| Estimated Authorization Level | 3,052 | 3,185 | 3,185 | 0 | 0 | 0 |
| Estimated Outlays | 2,807 | 3,112 | 3,144 | 908 | 480 | 144 |

[1] The 1997 and 1998 figures are the amounts appropriated for programs authorized by this bill. The $29 million shown for 1999 is the amount already authorized by the Oil Pollution Act of 1990 for appropriations from the OSLTF.

The costs of this legislation fall within budget functions 300 (natural resources and environment) and 400 (transportation). Amounts provided in the bill for Coast Guard retirement have not been included in the above table because such pay is an entitlement under current law, requiring no annual authorization of appropriations.

Basis of estimate: For purposes of this estimate, CBO assumes that S. 1259 will be enacted during the first few months of calendar 1998, and that the full amounts authorized for USCG programs will be appropriated for each fiscal year.

The additional authorization of $24 million for 1998 shown in the table represents the difference between the total stated in the bill for discretionary accounts and the amount already appropriated for such accounts to date. For 1999, the additional authorization level of $3,156 million is as stated in the bill. That amount does not include $28.5 million of the $48.5 million to be derived from the OSLTF. (This amount, which consists of $25 million for Coast Guard operations and $3.5 million for research, is excluded because it is already authorized under existing law.) Outlays for all years are estimated on the basis of historical spending patterns for Coast Guard programs.

Section 201 of S. 1259 would increase future costs of Coast Guard operations and other discretionary programs, assuming appropriation of the necessary amounts, by removing the $15,000 cap on severance payments for warrant officers. In total, CBO estimates the cost of this provision to be less than $200,000 per year.

Several provisions of Title IV would direct the Coast Guard to convey without reimbursement certain real property to various units of local government or nonprofit organizations. Because none of these sites are likely to be sold under current Administration plans, their donation would have no effect on the federal budget.

Other provisions of S. 1259 are not expected to have any significant impact on the federal budget.

Pay-as-you-go considerations: Section 252 of the Balanced Budget and Emergency Deficit Control Act of 1985 sets up pay-as-you-go procedures for legislation affecting direct spending or receipts. Two provisions of S. 1259 could affect receipts by increasing civil penalties, but CBO estimates that the amount of any new revenues would not be significant.

Estimated impact on State, local, and tribal governments: S. 1259 contains no intergovernmental mandates as defined in UMRA; however, several provisions would affect state and local governments. CBO estimates that, on the whole, the bill's provi-

sions, including those discussed above, would benefit state and local governments.

The bill's amendments to the federal Vessel Identification System could result in more vessel owners seeking state numbering and titling of their boats. These amendments would make state-titled vessels more likely to receive preferred mortgages. As a result, vessel owners who previously would have sought federal documentation would be more likely to seek state titles. CBO estimates that the impact of these changes on state budgets would be negligible. Furthermore, states generally charge fees for vessel services that cover the costs of administering this voluntary program.

Any additional costs associated with the property conveyances authorized in this bill would be incurred voluntarily by states.

Estimated impact on the private sector: S. 1259 would extend from 3 miles to 12 miles the territorial sea of the United States for purposes of enforcing the Ports and Waterways Safety Act and portions of Title 46 of the United States Code (Shipping). Thus, S. 1259 would extend the geographical coverage of existing private-sector mandates, regarding marine safety, on owners of operators of vessels visiting U.S. ports. Based on information provided by the Coast Guard, CBO estimates that this bill should impose no additional costs on the private sector because the same number of ships would be affected as under current law.

Previous CBO estimate: On July 31, 1997, CBO prepared a cost estimate for H.R. 2204, the Coast Guard Authorization Act of 1997, as ordered reported by the House Committee on Transportation and Infrastructure on July 23, 1997. The estimate for H.R. 2204 reflected that bill's higher authorization levels for both fiscal years 1998 and 1999.

Estimate prepared by: Federal Costs: Deborah Reis; Impact on State, Local, and Tribal Governments: Kristen Layman; and Impact on the Private Sector: Jean Wooster.

Estimate approved by: Paul N. Van de Water, Assistant Director for Budget Analysis.

## REGULATORY IMPACT STATEMENT

In accordance with paragraph 11(b) of rule XXVI of the Standing Rules of the Senate, the Committee provides the following evaluation of the regulatory impact of the legislation, as reported.

### NUMBER OF PERSONS COVERED

S. 1259 as reported by the Committee authorizes appropriations to continue existing Coast Guard programs and makes a number of changes to current law. The bill would have little, if any, regulatory impact, but a few of the bill's sections could impact some individuals and businesses, and the effects of these sections can be clarified as follows:

Section 302 of the reported bill prohibits the transport of cargo sponsored by the U.S. government on a vessel that has been detained by the Secretary for violation of an international safety convention to which the United States is a party. This section could reduce business opportunities for vessel owners and crew that might be available currently, but the reduction in business would

occur only as a result of a violation of important safety standards designed to protect human life, property, and the environment. The provision will not create additional regulation. Rather, it will help to strengthen compliance with international safety regulations already recognized and enforced by the United States.

Section 305 extends the territorial sea definition in the Ports and Waterways Safety Act and subtitle II of title 46, United States Code, from 3 nautical miles to 12 as measured from the baselines of the United States. This change expands the area of application of these laws that provide for safe maritime transportation and protection of the environment. The laws currently apply to vessels when they enter the area within 3 nautical miles of the U.S. coast. Since nearly all marine transport vessels operating from 3 to 12 nautical miles offshore also enter the current 3-mile territorial sea, they are already subject to the requirements of the laws amended by the reported bill. Section 305 does not, therefore, impose new requirements on the maritime industry.

Section 409 establishes criminal sanctions for failure by a person in charge of an aircraft to obey an order to land issued by an authorized Federal law enforcement officer and for failure by a person in charge of a vessel to obey an order issued by an authorized Federal law enforcement officer to "bring to" that vessel. While this section could impact some aircraft and vessel owners and operators, it is intended only to improve enforcement of existing Federal laws and to affect only those aircraft and vessels suspected of engaging in unlawful activity or, in the case of vessels, those required under other Federal laws and regulations to comply with boarding orders from authorized Federal law enforcement officers. Furthermore, the section is not intended in any way to compromise existing protections against illegal searches by Federal law enforcement agencies.

## ECONOMIC IMPACT

As noted above, sections 302 and 409 of the reported bill could have an economic impact on some individuals and businesses, but these impacts would result from penalties imposed for violations of existing Federal regulations and laws or from lawful attempts by authorized Federal law enforcement agencies to enforce existing Federal regulations and laws, particularly those related to illegal drug importation and money laundering. These sections do not impose new regulatory requirements on individuals and businesses.

## PRIVACY

Section 303 of the reported bill enhances personal privacy protections by clarifying that the Coast Guard is not required to release to the public personal information such as home telephone numbers, home addresses, and social security numbers collected in the course of a marine casualty investigation.

Section 409 should not have a significant impact on the personal privacy of persons in charge of aircraft or vessels because the section does not compromise the existing protections against illegal searches that provide a check against inappropriately intrusive behavior by Federal law enforcement authorities. The authority to order aircraft to land is intended to be used only if a Federal law

enforcement agency has a reason to suspect that the person in charge of an aircraft is involved in illegal drug activity or money laundering. Under section 89 of title 14, United States Code, the Coast Guard is currently authorized to board and examine any vessel subject to the jurisdiction of the United States, and section 409 is intended to improve enforcement of this existing authority.

## PAPERWORK

S. 1259 as reported should not significantly increase paperwork requirements for individuals and businesses.

## SECTION-BY-SECTION ANALYSIS

*Section 1. Short title*

This section states the short title of the bill as the "Coast Guard Authorization Act for Fiscal Years 1998 and 1999".

*Section 2. Table of sections*

This section provides a table of the sections in the legislation.

## TITLE I—AUTHORIZATIONS

*Section 101. Authorization of appropriations*

This section of the reported bill would authorize Coast Guard appropriations for FY 1998 and FY 1999. The following chart summarizes the FY 1998 and the FY 1999 authorization levels proposed in subsections (a) and (b), respectively:

PROPOSED LEVELS FOR PROGRAMS AUTHORIZED IN S. 1259 AS REPORTED

[By fiscal years, in millions of dollars]

| Programs | FY 1998 | FY 1999 |
|---|---|---|
| Operating Expenses | 2,740 | 2,740 |
| AC&I | 379 | 379 |
| R&D | 19 | 19 |
| Retired Pay | 645.7 | 675.6 |
| Alteration of Bridges | 26 | 26 |
| Environmental Compliance | 21 | 21 |
| Total | 3,830.7 | 3,860.6 |

*Section 102. Authorized levels of military strength and training*

This section of the reported bill provides authorization for levels of military personnel strength and training for FY 1998 and FY 1999. Subsection (a) authorizes a Coast Guard end-of-fiscal-year strength for active duty military personnel of 37,660 as of September 30, 1998. Subsection (b) authorizes average military training student loads in FY 1998 of 1,368 student years for recruit and special training; 98 student years for flight training; 283 student years for professional training in military and civilian institutions; and 797 student years for officer acquisition.

Subsection (c) authorizes a Coast Guard end-of-fiscal-year strength for active duty military personnel of such numbers as may be necessary as of September 30, 1999. Subsection (d) authorizes average military training student loads in FY 1999 of such student

years as may be necessary for each category. The authorized strength levels in this section do not include members of the Coast Guard Ready Reserve called to active duty for special or emergency augmentation of regular Coast Guard forces for periods of 180 days or less.

## TITLE II—COAST GUARD MANAGEMENT

*Section 201. Severance pay*

Subsection (a) of this section of the reported bill amends section 286a(d) of title 14, U.S. Code, to eliminate the $15,000 cap on severance pay for regular Coast Guard warrant officers. This provision will eliminate an inequity in current law under which severance pay for Coast Guard warrant officers, unlike severance pay for all other military personnel, is subject to a statutory dollar limit.

When the Coast Guard severance pay cap was originally enacted, it was similar to the $15,000 cap in place at the time for DOD warrant officer separation pay (the DOD equivalent of severance pay). In 1980, however, the DOD cap was increased to $30,000 (P.L. 96-513), and then it was completely eliminated by section 501 of the FY 1991 Department of Defense Authorization Act (P.L. 101-510). Currently, no statutory dollar limits apply to the separation pay of any members of the DOD services, nor are there any statutory caps on the severance pay available to other regular Coast Guard officers, Coast Guard Reserve officers, or Coast Guard enlisted personnel. Subsection (a) extends the same treatment to severance pay for Coast Guard warrant officers. On average, four Coast Guard warrant officers are separated with severance pay annually.

Subsections (b) and (c) provide the Secretary with the discretionary authority to deny severance pay to a warrant officer or an officer, respectively, who is separated from Coast Guard service with an other than honorable discharge, if the Secretary determines that the circumstances under which the warrant officer or officer was discharged do not warrant severance pay. This authority is comparable to that available to the DOD services.

*Section 202. Authority to implement and fund certain awards programs*

This section of the reported bill amends section 93 of title 14, U.S. Code, to authorize Coast Guard use of appropriations or other available funds to provide for the honorary recognition of individuals and organizations that significantly contribute to Coast Guard programs, missions, or operations. Specifically, this section authorizes the use of such funds to purchase award items such as trophies and plaques and to pay for reasonable ceremony and presentation expenses.

The Coast Guard has traditionally maintained programs that formally recognize the significant contributions of citizens, non-profit organizations, businesses, and state and local governments to the missions and operations of the Coast Guard. These programs include the William M. Benkert Award to recognize excellence in marine environmental protection and the Charles P. Murphy Award to recognize contributions to national and international marine safety protection. The Comptroller General has ruled, however,

that appropriated funds may not be used for this purpose without specific statutory authorization. The U.S. Department of Agriculture, the Department of the Interior, and the National Aeronautics and Space Administration, among others, have statutory authorizations which allow the use of available funds and appropriations to provide awards to private individuals and organizations.

This section provides similar authority for the Coast Guard. The Committee recognizes the value of honoring the contributions of private citizens, organizations, businesses, and state and local governments to the many important operations of the Coast Guard, and the value of encouraging similar contributions in the future. The Committee expects, however, that the Coast Guard will conduct these programs in a prudent and fiscally responsible manner.

*Section 203. Use of appropriated funds for commercial vehicles at military funerals*

This section of the reported bill amends section 93 of title 14, U.S. Code, to authorize use of appropriated funds for renting or leasing commercial vehicles to provide transportation for family members attending military funerals of eligible retired Coast Guard personnel at national cemeteries. The Coast Guard does not maintain a motor pool that can provide transportation to next of kin for these occasions, and under current law, the Coast Guard does not have the authority to use appropriated funds to rent or lease vehicles for these functions. Providing transportation for the family members of deceased Coast Guard personnel eligible for burial in national cemeteries is an appropriate way to honor the contributions and sacrifices of the deceased service members. The Coast Guard estimates that the annual costs associated with these rentals would be less than $1000.

*Section 204. Authority to reimburse Novato, California, reuse commission*

This section authorizes up to $25,000 for the reimbursement of the City of Novato, California, for expenses incurred by the city in revising the Hamilton Reuse Planning Authority's base reuse plan. The city had to revise the reuse plan after the Coast Guard changed its request for housing at the former Hamilton Air Force Base, and these revisions resulted in additional costs for the city. The Committee strongly encourages the Coast Guard to take steps to ensure its timely participation in the military base realignment and closure process and to avoid similar costs in the future.

*Section 205. Eliminate supply fund reimbursement requirement*

This section of the reported bill amends section 650(a) of title 14, U.S. Code, to eliminate the requirement that the Coast Guard supply fund (Supply Fund) be reimbursed when commodities such as dining facility food items, fuel, and certain spare parts and uniform items are transferred to other Coast Guard accounts.

The Coast Guard maintains a number of commodities as capitalized assets within its Supply Fund account. Under current law, these commodities cannot be transferred from the Supply Fund unless the fund is reimbursed for their value. Processing these reim-

bursement transactions requires a significant investment of time and resources even though this reimbursement is not necessary to ensure that commodity transfers are properly accounted for. The Coast Guard has determined that although food items account for only 7 percent of the Supply Fund inventory value, 89 percent of their Supply Fund accounting efforts are devoted to the maintenance of inventory for the Coast Guard dining facilities.

Section 205 allows food items and other commodities that are currently maintained as part of the Supply Fund to be transferred from the Supply Fund account without the need for reimbursement and the associated transactions. This provision is intended to help improve the efficiency of the Coast Guard's accounting procedures without adversely affecting accounting safeguards. Monthly operating statements which track each step of a transaction will continue to be required. The accounting change in this section is supported by the Department of the Treasury.

*Section 206. Disposal of certain material to Coast Guard Auxiliary*

This section of the reported bill amends section 641 of title 14, U.S. Code, to authorize the Commandant of the Coast Guard to transfer directly personal property of the Coast Guard to the Coast Guard Auxiliary (Auxiliary). Such a transfer may be made, with or without charge, upon a determination that: (1) after consultation with the Administrator of General Services, such property is excess to the needs of the Coast Guard but is suitable for use by the Auxiliary in performing Coast Guard functions, powers, duties, missions, or operations; and (2) this excess property will be used solely by the Auxiliary for these purposes. This section also stipulates that no appropriated funds may be used to operate, maintain, repair, alter, or replace any property transferred under this section except as permitted by section 830 of title 14, U.S. Code.

The Auxiliary is a 36,000 member volunteer organization that provides the Coast Guard with low-cost assistance in its boating safety mission. Authorizing legislation for the Auxiliary dates back to World War II, when the Auxiliary conducted anti-submarine patrols and served as a predecessor to the current Coast Guard Reserve (Coast Guard Auxiliary and Reserve Act of 1941, 55 Stat. 9). Auxiliary members place themselves and their privately-owned vessels and aircraft at risk while conducting Coast Guard missions.

The assistance provided by the Auxiliary to the Coast Guard (and the States) is often limited by the lack of availability of vessels and other equipment. Section 641 of title 14, U.S. Code, authorizes incorporated units of the Auxiliary to receive obsolete or other unneeded material of the Coast Guard. Under current law, however, such excess material is available to the Auxiliary only after it has first been reported to the General Services Administration and made available to all other Federal agencies, State and local governmental agencies, and private non-profit organizations.

## TITLE III—MARINE SAFETY AND ENVIRONMENTAL PROTECTION

*Section 301. Alcohol testing*

Subsection (a) of this section of the reported bill amends section 7702 of title 46, U.S. Code, to require the Secretary to establish procedures to ensure that alcohol testing of the appropriate crew members of a vessel involved in a serious marine incident is conducted within two hours after the incident is stabilized. Under current law, the Secretary has discretion in determining when to require drug and alcohol tests for the holder of a license, certificate of registry, or merchant mariner's document. In addition to establishing a two-hour time limit for alcohol testing after a serious marine incident, this subsection amends section 7702 to make mandatory preemployment (with respect to drugs only), periodic, random, reasonable cause, and post-accident testing of such individuals.

The changes in subsection (a) are intended to ensure that alcohol testing is conducted promptly after a serious marine incident occurs. Under current Coast Guard regulations, the marine employer must have crew members who perform safety-sensitive functions on a vessel involved in a serious marine incident tested for alcohol and drug use promptly after the incident occurs. But compliance with this requirement is inadequate. On September 27, 1996, the Liberian-registered oil tanker, *Julie N*, struck a bridge in Portland, Maine, spilling 170,000 gallons of oil into the Fore River near Casco Bay. Several days after the accident occurred, it was revealed that the pilot of the vessel was not tested for alcohol, thereby preventing accident investigators from determining whether alcohol use played a role in the oil spill. The National Transportation Safety Board has stated that there are approximately 27 other cases since the *Exxon Valdez* oil spill in 1989 in which mandatory post-accident alcohol and drug testing was not properly completed after serious maritime accidents.

Subsection (a) focuses on alcohol testing because the window of opportunity to conduct these tests is short compared to the window for drug testing. According to the Coast Guard, alcohol tests must be completed within eight hours of an accident in order to provide reliable results. Federal rules for accidents involving most of the other transportation modes require alcohol tests to be conducted within two hours of the accident unless safety concerns preclude the conduct of these tests. Subsection (a) applies a comparable standard, requiring the Coast Guard to ensure that alcohol tests have been completed no later than two hours after a serious marine incident has occurred or been stabilized to prevent further threats to public safety or the environment.

The Coast Guard is a federal law enforcement agency and the lead marine incident response agency, and its responsibilities encompass the monitoring and enforcement of prompt compliance with federal testing rules. The Coast Guard can meet the requirement in subsection (a) by either verifying that the marine employer has conducted the tests or by conducting the tests itself.

The Committee does not believe that this requirement imposes a significant burden on the Coast Guard. By the time a serious marine incident is stabilized, many Coast Guard personnel are in-

volved in the accident response on scene or on shore, and staff can be detailed without detracting from the accident response to verify that the marine employer conducts the tests within the two-hour time limit. In addition, the equipment necessary to conduct an alcohol test is relatively inexpensive and portable, and many Coast Guard units already have such equipment. As an alternative, if neither the marine employer nor the Coast Guard can conduct the tests within the time limit, arrangements could be made with local law enforcement agencies to conduct the tests.

The changes made by this subsection of the reported bill do not alter in any way the responsibility of a marine employer to ensure that all employees in safety sensitive positions are properly and expeditiously tested for alcohol use. In fact, subsection (b) amends section 2115 of title 46, U.S. Code, to increase from $1,000 to $5,000 the maximum civil penalty for failure to comply with Coast Guard alcohol and drug testing requirements. This increase should provide a stronger disincentive to violations of testing procedures.

Subsection (c) of the reported bill amends section 2302(c)(1) of title 46, U.S. Code, by increasing the maximum civil penalty from $1,000 to $5,000 for a first violation of Coast Guard rules prohibiting the operation of a vessel while under the influence of alcohol or drugs. The increase is intended to provide a stronger disincentive to the operation of a vessel while intoxicated. Each year, hundreds of citizens die as a result of accidents involving vessels whose operators were intoxicated, and the number of such accidents has increased in recent years. While increased penalties should help to reduce the number of vessel accidents involving drugs or alcohol, the Committee recognizes that more must be done to address this problem and urges the Coast Guard to devote serious attention to reducing substantially the number of such accidents in the future.

*Section 302. Penalty for violation of international safety convention*

This section of the reported bill amends section 2302 of title 46, U.S. Code, to prohibit a vessel from transporting cargo sponsored by the Federal government if the vessel has been detained by the Coast Guard for violation of an international safety convention to which the United States is a party, and the Secretary has published notice of the detention. Such a vessel is prohibited from transporting government-sponsored cargoes for one year after the date of the detention, unless the Secretary grants an appeal of the detention. In addition, the head of a Federal agency is permitted to grant an exemption from the prohibition if the owner of the affected vessel provides compelling evidence that the vessel is currently in compliance with applicable international safety conventions to which the United States is a party. The transport prohibition applies to cargo for which a Federal agency has contracted for shipping by water or for which a Federal agency has provided financing which results in the shipping of the cargo by water. The Coast Guard currently maintains a Port State Control website on the Internet that lists all of the foreign-flag vessels to which this section applies.

According to Coast Guard statistics, 69 of the 476 vessels detained in 1996 carried U.S. Government preference cargoes between 1992 and 1997. Also, 22 owners or operators that had mul-

tiple vessels detained in 1996 also transported government cargoes between 1992 and 1997. The Committee believes that it is inappropriate for a vessel to receive financial benefits from carrying Federally-sponsored cargoes when that vessel is not in compliance with applicable international safety rules recognized by the United States. Allowing such vessels to transport Federally-sponsored cargo undermines compliance with important safety standards and is unfair to vessel owners and operators who adhere to these standards.

*Section 303. Protect marine casualty investigations from mandatory release*

This section of the reported bill amends section 6305(b) of title 46, U.S. Code, to clarify that the Coast Guard is not required to release to the public personal information such as home telephone numbers, home addresses, and social security numbers gathered in the course of a marine casualty investigation.

Current law states that reports of marine casualty investigations shall be made available to the public, but it provides an exception from mandatory public release for any information in a report related to national security. The statute's explicit reference to only national security has generated confusion as to whether the law excludes the protection of other kinds of information, particularly personal information not normally required to be released under laws such as the Freedom of Information Act (FOIA). Certain personal information is exempted from mandatory disclosure under FOIA and other laws in order to protect individuals from unwarranted invasions of their personal privacy, to encourage the full cooperation of witnesses, and to protect witnesses from retaliation by parties at fault. These same interests apply in the investigation of a marine casualty, but the existing language of section 6305(b) may be interpreted to preclude the Coast Guard from withholding certain personal information from public release in these cases.

Section 303 of the reported bill addresses this problem by deleting the singular national security exemption in the current law and replacing it with language stating that the Coast Guard is not required to release information otherwise protected under section 552(b) of FOIA (5 U.S.C. 552(b)) or other Federal laws. Thus, section 303 has the effect of fully applying the FOIA rules for determining which information is appropriate for public release. Section 552(b) exempts national security information as well as certain personal information from public disclosure. The personal information exemption under FOIA is not automatic, however. It can be used only when the interest in protecting personal privacy outweighs any benefit that would result from the release of the information.

*Section 304. Eliminate biennial research and development report*

This section of the reported bill eliminates the requirement under section 7001 of the Oil Pollution Act of 1990 (33 U.S.C. 2761) that the chairman of the Interagency Coordinating Committee on Oil Pollution Research (Interagency Committee) issue a report every two years on the Committee's activities during the preceding two-year period and on activities planned for the upcoming two-year period.

The Interagency Committee consists of representatives of 13 Federal agencies, and it is chaired by the Coast Guard. The purposes of the Interagency Committee are to prepare a comprehensive and coordinated Federal oil pollution research and development plan and to promote cooperation in oil pollution research and development among Federal agencies, industry, research institutions, the States, and other nations. In recent years, however, funding for the Interagency Committee's activities has been very limited, and there is relatively little information to report. Thus, the mandatory preparation of the report is unnecessary.

*Section 305. Extension of territorial sea for certain laws*

This section of the reported bill amends the Ports and Waterways Safety Act (PWSA, 33 U.S.C. 1222 et. seq.) and subtitle II of title 46, United States Code, by extending the U.S. territorial sea for the purposes of these laws from 3 to 12 nautical miles from U.S. coastal baselines. The U.S. territorial sea is a maritime zone extending beyond the land territory and internal waters of the United States over which the United States exercises sovereignty and jurisdiction. International law recognizes a 12 nautical mile territorial sea for sovereign nations. Under Presidential Proclamation 5928 of December 27, 1988, President Reagan extended the U.S. territorial sea from 3 to 12 nautical miles to advance national security and other foreign relations interests of the United States.

Section 305 makes the application of these domestic maritime laws consistent with international law and Presidential Proclamation 5928. Subsection (a) amends section 102 of the PWSA by adding a new definition of the term "navigable waters of the United States." The term is defined to include all waters of the U.S. territorial sea as described in Presidential Proclamation 5928. As a result of this amendment, provisions of the PWSA would be enforceable from the baselines of the U.S. out to 12 nautical miles. Under the PWSA, the Coast Guard establishes vessel operating requirements for all U.S. and foreign vessels, including vessel traffic systems. The PWSA also authorizes the Coast Guard to direct the movement and anchorage of vessels, establish safety zones, and investigate vessel casualties. In addition, the PWSA enables the Coast Guard to prohibit the operation in U.S. waters of substandard vessels, including those with a history of accidents, pollution incidents, or serious repair problems, as well as those vessels that discharge oil or hazardous materials or that are improperly manned.

Under the current language in the PWSA, the Coast Guard has been limited in its ability to fully protect public safety, the marine environment, and maritime transportation. For example, in November 1996, there were two instances in which vessels collided with navigational light stations at distances of 8.6 nautical miles and 7 nautical miles from the shore, and the Coast Guard was unable to establish safety zones around the perimeter of the accident sites. Rather, the Coast Guard could only issue a notice of warning to mariners. Had the same collisions occurred within three nautical miles, the Coast Guard would have been able to establish safety zones in order to control and protect vessel traffic in the area. The change made by subsection (a) of the reported bill extends the

Coast Guard's authority to enforce important maritime safety and marine environmental protection requirements from the current 3 nautical miles to 12 nautical miles. It will not, however, affect a vessel's right of innocent passage through the U.S. territorial sea or transit passage through U.S. navigable waters that are part of an international strait.

Subsection (b) amends subtitle II of title 46, U.S. Code, to apply a 12 nautical mile territorial sea to the vessel safety and shipping laws contained therein. Subtitle II includes the majority of U.S. maritime safety and seaman protection laws. These laws are administered by the Coast Guard and include inspection and regulation of vessels; civil penalties and criminal sanctions for the negligent operation of vessels in U.S. waters; load lines and measurements of vessels; investigation of marine casualties; merchant seaman protection and relief; merchant seaman licenses and certificates; the manning of commercial vessels; and recreational boating safety programs. The extension of the U.S. territorial sea from 3 to 12 nautical miles for purposes of subtitle II would improve the Coast Guard's ability to ensure the safe operation of vessels in U.S. waters and enhance the Coast Guard's ability to fully implement its Port State enforcement program. Under this program, the Coast Guard regulates the operation of potentially unsafe foreign flag vessels seeking to enter U.S. ports.

Specifically, paragraph (b)(1) inserts a new definition of "navigable waters of the United States" in the general definitions section of subtitle II (46 U.S.C. 2101). As defined, the term will include all waters of the 12-mile territorial sea of the United States.

Paragraph (b)(2) amends section 2301 of title 46, U.S. Code, by clarifying that "waters subject to the jurisdiction of the United States" include all waters of the 12-mile territorial sea of the United States. This amendment clarifies the authority of the Coast Guard to control and assess penalties against foreign vessels operating negligently in U.S. waters.

Paragraph (b)(3) amends section 4102(e) of title 46, U.S. Code, to ensure that the Coast Guard regulations for manned uninspected vessels, including the number and type of emergency locating equipment required, will continue to apply beyond three miles from the baseline of the United States, an area which is no longer considered high seas.

Paragraph (b)(4) amends section 4301(a) of title 46, U.S. Code, by including within a new definition of "waters subject to the jurisdiction of the United States" all waters of the 12-mile territorial sea. The amendment enhances the authority of the Coast Guard to regulate recreational vessel safety in U.S. waters.

Paragraph (b)(5) amends section 4502(a)(7) of title 46, U.S. Code, by striking "on vessels that operate on the high seas" and inserting "beyond 3 nautical miles from the baselines from which the territorial sea of the United States is measured". The amendment enables the Coast Guard to continue to require emergency position indicating radio beacons on vessels that operate beyond three nautical miles from the baseline from which the territorial sea is measured.

Paragraph (b)(6) amends section 4506(b) of title 46, U.S. Code, by inserting new language to clarify that commercial fishing vessels

are exempt from Coast Guard regulations under this chapter only if they are operating in U.S. internal waters or within 3 nautical miles from the baselines of the United States, but are not exempt if they are operating between 3 and 12 nautical miles.

Paragraph (b)(7) amends section 8502(a)(3) of title 46, U.S. Code, by clarifying that the requirement for Federal pilots on coastwise seagoing vessels continues to apply to vessels operating within three nautical miles from the baselines of the United States.

Paragraph (b)(8) amends section 8503(a)(2) of title 46, U.S. Code, to clarify that the Coast Guard may continue to require a Federal pilot on a self-propelled vessel when a pilot is not required by State law if the vessel is engaged in foreign commerce and is operating within three nautical miles from the baselines from which the U.S. territorial sea is measured.

*Section 306. Law enforcement authority for special agents of the Coast Guard Investigative Service*

This section of the reported bill amends section 95 of title 14, U.S. Code, to expand and clarify the law enforcement authorities of special agents of the Coast Guard Investigative Service (CGIS). Under current law, CGIS special agents may carry firearms. Section 306 adds the authority to execute and serve warrants and to make arrests without a warrant if a Federal offense is committed in the agent's presence or if the agent has probable cause to believe that a person has committed or is committing a felony under Federal law. In addition, this section states that these law enforcement authorities can be exercised only in the enforcement of laws for which the Coast Guard has law enforcement authority or in exigent circumstances. Finally, this section of the reported bill authorizes the Commandant of the Coast Guard to designate the CGIS special agents who will have enhanced law enforcement authority under the section.

The CGIS is the Coast Guard's investigative organization, conducting investigations related to military justice, procurement fraud, environmental crimes, and other criminal matters relevant to Coast Guard duties. Under current Department of Justice regulations (28 C.F.R. Part 60), military special agents of the CGIS are identified as agents authorized to apply for and execute search warrants through local U.S. Attorneys. Section 306 clarifies that civilian special agents are authorized to apply for and execute warrants as well.

Since 1990, CGIS civilian special agents have been designated as Deputy U.S. Marshals, a designation which gives them the authority to make arrests related to CGIS investigations. But this special deputation authority must be renewed annually through a time-consuming application process involving the Department of Justice's Criminal Division, the U.S. Marshals Service, and the Coast Guard. The fact that deputation authority has been granted to civilian CGIS special agents consistently since 1990 provides clear evidence of the appropriateness and utility of giving these agents the authority to make arrests. The statutory changes made by this section of the reported bill obviate the need to repeat the lengthy and costly annual renewal process through the Justice Department and the U.S. Marshals Service.

This section will improve the effectiveness and efficiency of the CGIS in carrying out the missions of the Coast Guard and the U.S. Attorney General. It will also provide CGIS special agents with law enforcement authority comparable to that which is available to the agents of the DOD Defense Criminal Investigative Service.

## TITLE IV.—MISCELLANEOUS

*Section 401. Vessel identification system amendments*

This section amends several provisions in title 46, U.S. Code, to help ensure the effective operation of the Federal Vessel Identification System (VIS). Now under development by the Coast Guard, the VIS will establish a new database capable of providing law enforcement officials and other authorized users ready access to registration, documentation, ownership, and other kinds of information for a huge number of vessels across the United States.

The VIS will operate in a manner similar to the Vehicle Identification Number (VIN) system for automobiles. Today, a boat owner could keep a $25,000 boat on a $2,500 trailer, and if both the boat and trailer were stolen, law enforcement authorities could track a future sale of the trailer, even if it occurred in another state, by using the VIN system. However, due to the lack of an effective interstate vessel tracking system, the boat could simply be transported to another state, re-registered, and then sold to an unknowing buyer. Access to key vessel information through the VIS will provide the Coast Guard and other law enforcement agencies with an improved ability to deter fraud and other crime. Moreover, marine consumers and lenders will receive an increased level of protection in complex transactions, one result of which should be enhanced access to vessel financing.

Under a pilot program, a Coast Guard contractor has designed the VIS pursuant to the Coast Guard's specifications and has tested the system. According to the Coast Guard, the initial tests indicate that the system appears to be sound. The Coast Guard is currently conducting its own testing as well, and in the summer of 1998, the Coast Guard expects the first two pilot states, Wisconsin and Ohio, to enter the operational test and evaluation stage. Virginia, the third pilot state, is expected to begin using the VIS shortly thereafter.

Section 401 makes a number of changes in law necessary for full and effective implementation of the VIS. Under current law, a vessel titled in a State is ineligible for Federal documentation. In practice, however, some vessels may receive state titles while Federal documentation is pending. As a result, a vessel owner or lender unaware of the state title may later find out that the vessel is ineligible for Federal documentation and, consequently, that a mortgage filed with the Coast Guard could be neither perfected nor preferred, possibly resulting in a complete loss of collateral for the lender. Paragraph (1) of section 401 addresses this problem by amending section 12102(a) of title 46, U.S. Code, to delete the language prohibiting the Federal documentation of a vessel titled in a State.

Consistency of documentation is an important feature of the VIS. Therefore, while a vessel titled in a State should be eligible to obtain Federal documentation, it is not advantageous to permit the

**Exhibit C**

Dated: February 20, 2003.

**Michael D. Brown,**

*Deputy Director.*

[FR Doc. 03–4722 Filed 2–27–03; 8:45 am]

BILLING CODE 6718–01–P

## DEPARTMENT OF TRANSPORTATION

### Coast Guard

### 46 CFR Part 4

**[USCG–2001–8773]**

**RIN 2115–AG07**

## Marine Casualties and Investigations; Chemical Testing Following Serious Marine Incidents

**AGENCY:** Coast Guard, DOT.

**ACTION:** Notice of proposed rulemaking.

**SUMMARY:** The Coast Guard proposes changing the alcohol testing requirements for commercial vessels following a serious marine incident. The 1998 Coast Guard Authorization Act requires the Coast Guard to establish procedures ensuring alcohol testing is conducted within two hours of a serious marine casualty. The Coast Guard proposes to establish requirements for testing within the statutory time limits, to expand the existing requirements for commercial vessels to have alcohol-testing devices on board, and to authorize use of a wider variety of testing devices. This rulemaking would also make additional minor procedural changes to Part 4, including a time limit for conducting drug testing following a serious marine incident.

**DATES:** Comments and related material must reach the Docket Management Facility on or before June 30, 2003. Comments sent to the Office of Management and Budget (OMB) on collection of information must reach OMB on or before April 29, 2003.

**ADDRESSES:** To make sure that your comments and related material are not entered more than once in the docket, please submit them by only one of the following means:

(1) By mail to the Docket Management Facility (USCG–2001–8773), U.S. Department of Transportation, room PL–401, 400 Seventh Street SW., Washington, DC 20590–0001.

(2) By delivery to room PL–401 on the Plaza level of the Nassif Building, 400 Seventh Street SW., Washington, DC, between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays. The telephone number is 202–366–9329.

(3) By fax to the Docket Management Facility at 202–493–2251.

(4) Electronically through the Web Site for the Docket Management System at *http://dms.dot.gov.*

The Docket Management Facility maintains the public docket for this rulemaking. Comments and material received from the public, as well as documents mentioned in this preamble as being available in the docket, will become part of this docket and will be available for inspection or copying at room PL–401 on the Plaza level of the Nassif Building, 400 Seventh Street SW., Washington, DC, between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays. You may also find this docket on the Internet at *http://dms.dot.gov.*

**FOR FURTHER INFORMATION CONTACT:** If you have questions on this proposed rule, call Mr. Robert C. Schoening, Coast Guard, at 202–267–0684. If you have questions on viewing or submitting material to the docket, call Dorothy Beard, Chief, Dockets, Department of Transportation, telephone 202–366–5149.

**SUPPLEMENTARY INFORMATION:**

### Request for Comments

We encourage you to participate in this rulemaking by submitting comments and related material. If you do so, please include your name and address, identify the docket number for this rulemaking (USCG–2001–8773), indicate the specific section of this document to which each comment applies, and give the reason for each comment. You may submit your comments and material by mail, hand delivery, fax, or electronic means to the Docket Management Facility at the address under **ADDRESSES**; but please submit your comments and material by only one means. If you submit them by mail or hand delivery, submit them in an unbound format, no larger than 8½ by 11 inches, suitable for copying and electronic filing. If you submit them by mail and would like to know they reached the Facility, please enclose a stamped, self-addressed postcard or envelope. We will consider all comments and material received during the comment period. We may change this proposed rule in view of them.

Anyone is able to search the electronic form of all comments received into any of our dockets by the name of the individual submitting the comment (or signing the comment, if submitted on behalf of an association, business, labor union, etc.). You may review DOT's complete Privacy Act Statement in the **Federal Register** published on April 11, 2000 (Volume 65, Number 70; pages 19477–78) or you may visit *http://dms.dot.gov.*

### Public Meeting

We do not now plan to hold a public meeting. But you may submit a request for one to the Docket Management Facility at the address under **ADDRESSES** explaining why one would be beneficial. If we determine that a public meeting would be helpful to this rulemaking, we will hold one at a time and place announced by a later notice in the **Federal Register**.

### Background and Purpose

The current regulations in 46 CFR part 4 require marine employers to take all practicable steps after a serious marine incident (SMI) to ensure that chemical testing is conducted. The regulations do not specify a time requirement for completing the tests for alcohol or for dangerous drugs following an SMI. Without a specified timeframe to conduct alcohol or drug testing after an SMI, in some instances tests were not conducted, and in other instances tests were not completed soon enough for the results to provide a determination of whether alcohol was present in an individual's system at the time the SMI occurred.

In 1998, Congress passed Public Law 105–383 which revised Title 46, U.S. Code, by adding a new section 2303a—"Post serious marine casualty alcohol testing" (hereafter section 2303a). Section 2303a requires the Coast Guard to establish procedures ensuring that after a serious marine casualty occurs, required alcohol testing is conducted no later than two hours after the casualty occurred. If the alcohol testing cannot be conducted within that timeframe because of safety concerns directly related to the casualty, section 2303a requires the alcohol testing to be conducted as soon thereafter as the safety concerns have been adequately addressed to permit such testing. However, section 2303a prohibits us from requiring alcohol testing to be conducted more than eight hours after the casualty occurs.

The Coast Guard requires that alcohol and drug testing be conducted after a serious marine incident. Section 2303a uses the term "serious marine casualty." For the purpose of this rulemaking serious marine casualty means the same as *serious marine incident* (SMI) as defined in 46 CFR 4.03–2. Section 2303a also uses the phrase "safety concerns directly related to the casualty" as the only reason the marine employer may postpone alcohol testing following an SMI.

This rule would provide that alcohol testing requirements after an SMI will not prevent personnel who are required to be tested for alcohol from performing duties in the aftermath of an SMI when their performance is necessary to meet safety concerns directly related to the casualty.

Coast Guard regulations in 46 CFR part 4 mandating alcohol testing after an SMI currently require marine employers to collect blood or breath specimens from each individual who was directly involved in the SMI, and for breath specimens, to use an alcohol breath-testing device that can accurately determine the presence of alcohol in an individual's system. The regulations also require inspected vessels certificated for unrestricted oceans routes and inspected vessels certificated for restricted overseas routes to have onboard at all times an alcohol breath-testing device capable of determining the presence of alcohol in an individual's system. The voyages of oceangoing vessels take the vessel and its crew far from shore-based facilities where alcohol testing can be conducted. If an SMI were to occur during the voyage, the vessel would not be able to return to a shore-based facility soon enough to complete alcohol testing for the results to indicate whether alcohol was present in an individual's system at the time the SMI occurred. Requiring marine employers to have testing devices onboard these vessels at all times makes it possible for them to ensure that proper alcohol testing is conducted in a timely manner.

Section 2303a applies to all commercial vessels. The majority of these vessels are not currently required to carry alcohol-testing devices on board the vessel. A regulatory requirement to conduct testing within the statutory timeframes cannot, by itself, ensure that alcohol testing after an SMI will be done within 2 hours. For the same reason we currently require oceangoing vessels to carry alcohol breath-testing devices onboard at all times, all other commercial vessels should also carry testing devices onboard their vessels. Having the devices onboard would make it possible for a marine employer to conduct the required alcohol testing within two hours after the occurrence of an SMI.

Given a choice between Evidential Breath Testing (EBT) devices or breath Alcohol Screening Devices (ASDs), we believe that most commercial vessel owners and operators would elect to carry breath ASDs for determining the presence of alcohol in an individual's system. Our assumption is based on the cost differential between the more expensive EBT and less expensive breath ASD. However, the cost of the less expensive breath ASD could still be too expensive for the smallest commercial vessel owners and operators. Providing vessel owners and operators with a wider variety of alcohol-testing devices to choose from would give them more control over the cost of compliance. Therefore, we are proposing to allow commercial vessel owners or operators to carry either breath or saliva alcohol-testing devices to satisfy the requirement to carry alcohol-testing devices onboard their vessels.

**Discussion of Proposed Rule**

*Statutory Time Requirements for Alcohol Testing After an SMI*

The Coast Guard proposes adding § 4.06–3, "Requirements for alcohol and drug testing following a serious marine incident," which would require commercial vessel marine employers to conduct alcohol testing within two hours after an SMI, unless precluded by safety concerns directly related to the casualty, as mandated by section 2303a. If alcohol testing is not completed within two hours based on this exception, it must be done within eight hours of the casualty. An explanation on the casualty report form CG–2692B would be required for alcohol testing that is not completed within the prescribed two-hour timeframe, and an additional explanation would be required when testing is not completed within the eight-hour timeframe.

We also propose adding a provision in this section requiring drug testing be conducted as soon as possible after an SMI but no later than 32 hours after its occurrence. We would require the same type of explanation on the casualty reporting form when drug testing is not completed within the prescribed times as when alcohol testing is not completed within provided timeframes.

*Responsibility of Individuals Directly Involved in Serious Marine Incidents*

We propose amending § 4.06–5, "Responsibility of individuals directly involved in serious marine incidents," so that individuals subject to alcohol testing after an SMI would be prohibited from consuming alcoholic beverages for eight hours following the SMI, or until after the required alcohol testing is completed.

*Adding a Requirement To Carry Alcohol-Testing Devices*

We propose adding § 4.06–15, "Availability of chemical testing devices," which would require marine employers to have sufficient breath- or saliva-alcohol testing devices capable of determining the presence of alcohol in an individual's system on board vessels. This requirement would make it possible for owners and operators to comply with the statute's two-hour timeframe for alcohol testing.

We would also move § 4.06–20(b), which requires commercial vessel owners and operators to have drug-testing kits readily available for use following an SMI, to this new section.

*Allowing Use of Saliva-Alcohol Testing Devices*

To prevent a redundancy, we propose moving the specimen collection requirements in § 4.06–10 to the specimen collection requirements in § 4.06–20. We also propose including saliva, along with blood and breath, as specimens that can be collected for alcohol testing. For alcohol testing conducted aboard vessels, we would allow vessel owners and operators to choose any breath- or saliva-alcohol testing device that can determine the presence of alcohol in a individual's system. For drug testing, we will keep the current requirement for testing kits complying with 49 CFR part 40.

*Delay of Implementation*

We propose a delayed implementation date of 180 days to ensure that all marine employers subject to a new carriage requirement have ample time to procure and learn how to use the required equipment.

*Related Rulemaking*

During the comment period of a recent rulemaking, docket number USCG 2000–7759 Chemical Testing (66 FR 42964), we received one comment letter that requested several changes to the regulations in 46 CFR part 4 requiring alcohol testing after an SMI. The comment recommended that we revise the regulations to allow the use of saliva-alcohol testing devices. The comment also requested that we remove the requirement to conduct alcohol or drug testing on human remains. A copy of this comment letter has been placed into this rulemaking docket. We have considered the comment and, as described in the discussion of proposed rule section of this notice, we are proposing to amend §§ 4.06–5, 4.06–10, and 4.06–20. However, at this time, we are not proposing to amend § 4.06–30 concerning testing of human remains.

*Department of Transportation Drug and Alcohol Testing Regulations*

This proposal would have no impact on any existing Department of

Transportation (DOT) or operating administration's drug and alcohol testing regulations. It is clear that the Coast Guard is not subject to the provisions of the Omnibus Transportation Employee Testing Act (OTETA) of 1991 (Pub. L. 102–143), although it does apply to other DOT modes. OTETA does not apply to Coast Guard required alcohol testing of employees in the regulated maritime industry.

The provisions of 49 CFR part 40, the DOT's drug testing requirements, apply to Coast Guard required drug testing. The provisions in 49 CFR part 40 that relate to alcohol testing, including use of the DOT Alcohol Testing Form, however, do not apply to Coast Guard required alcohol testing.

**Regulatory Evaluation**

This proposed rule is not a "significant regulatory action" under section 3(f) of Executive Order 12866 and does not require an assessment of potential costs and benefits under section 6(a)(3) of that Order. The Office of Management and Budget has not reviewed it under that Order. It is, however, considered "significant" under the regulatory policies and procedures of the DOT (February 26, 1979 (44 FR 11040)). A separate draft Regulatory Analysis is available in the docket as indicated under **ADDRESSES.** A summary of the analysis follows.

This proposed rulemaking would affect more than 183,400 commercial vessels. However, of those, approximately 2,600 vessels are already required to carry alcohol breath-testing devices. Since these vessels carry alcohol-testing devices on board, these marine employers can meet the statutory alcohol-testing timeframe requirement without additional cost. Thus, the number of vessels affected by the proposed requirement for the first time would be approximately 180,800.

Section 2303a of Title 46, U.S. Code, requires the Coast Guard to establish procedures ensuring alcohol testing is conducted within two hours of an SMI. This proposal would establish a requirement for all marine employers to have alcohol-testing devices readily available for use to meet the requirements for alcohol testing following an SMI.

This proposed rule would require that alcohol testing be conducted within two hours of the incident, whereas the current regulation does not specify a time frame for testing. This proposal would help to ensure compliance with the alcohol testing requirements after a SMI.

The cost of this proposal is estimated by assuming that, of the available ASDs, 90 percent of vessels would choose the least costly option of purchasing disposable saliva alcohol testing devices, while only 10 percent of vessels would choose a breath ASD. The lowest price breath ASD is more than twice as expensive as the most expensive saliva ASD. We also assume that no vessels would choose an EBT device because of its much higher initial purchase cost and ongoing maintenance and training costs.

The draft Regulatory Analysis shows a $97 median price for the purchase of saliva ASDs and a $393 median price for a breath ASD. Using those median prices, this proposed rule would have an estimated total cost to industry of approximately $144 million throughout the 10-year analysis period. In the first year, affected vessels would incur approximately $40 million. For subsequent years, the average annual cost is approximately $18 million. The draft Regulatory Analysis available in the docket as indicated under **ADDRESSES** further compares the costs of EBT devices versus ASDs as alternatives.

**Small Entities**

Under the Regulatory Flexibility Act (5 U.S.C. 601–612), we considered whether this proposed rule would have a significant economic impact on a substantial number of small entities. The term "small entities" comprises small businesses, not-for-profit organizations that are independently owned and operated and are not dominant in their fields, and governmental jurisdictions with populations of less than 50,000.

This proposed rule could impact about 3,500 small entities, based on the determination made by the Small Business Administration (SBA) in the North American Industry Classification System (NAICS codes 4831, 4832, 4872, 48831, 48832, and 48833). The SBA defines small entities either by revenue size or by employee size for all NAICS sectors. Depending on the NAICS sectors, firms with revenues less than $5 million and firms with less than 500 employees are defined as Small Entities. For the NAICS sectors and sub-sectors that apply to this analysis, SBA defined NAICS sectors 4831 (Deep Sea, Coastal, and Great Lakes water transportation) and 4832 (Inland Water Transportation) by employee size and the rest by revenue size. Those sectors defined by revenue size are: Scenic and Sightseeing Transportation (water), Port and Harbor Operations, Marine Cargo Handling, and Navigational Services to Shipping.

To determine the impact of the cost of this rule on these companies, we made the following assumptions:

- We assumed if a firm's revenues are less than $500,000, or it employs less than 20 employees, then it owns 5 vessels; and
- We assumed if a firm's revenues are in the range of $500,000 to $5 million, or it employs between 20 to 500 employees, then it owns 10 vessels.

With these assumptions, we calculated the cost impact of selecting saliva versus breath ASDs. As shown in Table below, costs will be a very small percentage of revenues for almost all companies.

The initial cost burden of alcohol breath-testing devices for some firms owning 5 vessels is 6.12 percent. It is reasonable to assume that under these circumstances the companies in question would choose to use disposable saliva ASDs or the next lowest priced breath ASDs, which would be a much lower cost to them.

COST BURDEN AS A PERCENTAGE OF ANNUAL REVENUES FOR SMALL ENTITIES

| For a Company that owns: | Using saliva ASDs | | Using breath ASDs | |
|---|---|---|---|---|
| | Initial | Recurring annual | Initial | Recurring annual |
| 5 vessels: | | | | |
| Cost | $925 | $750 | $2,840 | $525. |
| Impact (Cost/Avg. Revenue). | 0.01% to 1.99% | 0.01% to 1.62% | 0.04% to 6.12% | 0.01% to 1.13%. |
| 10 vessels: | | | | |
| Cost | $1,850 | $1,500 | $5,680 | $1,050. |
| Impact (Cost/Avg. Revenue). | 0.002% to 0.41% | 0.001% to 0.33% | 0.01% to 1.25% | 0.001 to 0.23%. |

Therefore, the Coast Guard certifies under 5 U.S.C. 605(b) that this proposed rule would not have a significant economic impact on a substantial number of small entities. If you think that your business, organization, or governmental jurisdiction qualifies as a small entity and that this rule would have a significant economic impact on it, please submit a comment to the Docket Management Facility at the address under **ADDRESSES.** In your comment, explain why you think it qualifies and how and to what degree this rule would economically affect it.

**Assistance for Small Entities**

Under section 213(a) of the Small Business Regulatory Enforcement Fairness Act of 1996 (Pub. L. 104–121), we want to assist small entities in understanding this proposed rule so that they can better evaluate its effects on them and participate in the rulemaking. If the rule would affect your small business, organization, or governmental jurisdiction and you have questions concerning its provisions or options for compliance, please consult Mr. Robert C. Schoening at 202–267–0684.

Small businesses may send comments on the actions of Federal employees who enforce, or otherwise determine compliance with, Federal regulations to the Small Business and Agriculture Regulatory Enforcement Ombudsman and the Regional Small Business Regulatory Fairness Boards. The Ombudsman evaluates these actions annually and rates each agency's responsiveness to small business. If you wish to comment on actions by employees of the Coast Guard, call 1–888–REG–FAIR (1–888–734–3247).

**Collection of Information (OMB 2115–0003)**

This proposed rule would call for a collection of information under the Paperwork Reduction Act of 1995 (44 U.S.C. 3501–3520). As defined in 5 CFR 1320.3(c), "collection of information" comprises reporting, recordkeeping, monitoring, posting, labeling, and other, similar actions. The title and description of the information collections, and a description of those who must collect the information follow.

The estimate covers the time for reviewing instructions, searching existing sources of data, gathering and maintaining the data needed, and completing and reviewing the collection.

*Title:* Marine Casualty Information; Chemical Drug and Alcohol Testing of Commercial Vessel Personnel; and Management Information System Requirements

*Summary of the Collection of Information:* The proposed regulation would require marine employers to document the reason for delaying the alcohol test on form CG–2692B. The requirement to report this information would be promulgated in 46 CFR 4.06–3. We would revise form CG–2692B accordingly to record the results of all types of alcohol testing (blood, breath, and saliva).

*Need for Information:* In accordance with 46 U.S.C. 2303a, the proposed regulation would require marine employers to document the reason for delaying the alcohol test on form CG–2692B if alcohol testing were not completed within the two-hour timeframe. If the alcohol test is not completed within the eight-hour timeframe, the marine employer must document the reason for the further delay of alcohol testing on form CG–2692B.

*Proposed Use of Information:* The information would be used to document the results of alcohol tests after SMIs.

*Description of the Respondents:* Marine employers whose employees, passengers, or vessels are involved in SMIs.

*Number of Respondents:* Currently, the approved OMB collection, estimates that 5,703 respondents fill out an accident report. This rulemaking would not change the number of incidents or accidents that trigger a response therefore the increase in respondents would be zero.

*Frequency of Response:* Continues to be once per incident.

*Burden of Response:* The possible additional burden imposed by this proposed rule is estimated to be so minimal that it does not merit changing the approved collection (a couple of additional minutes whenever documentation is needed). OMB approved, on previous submissions, the one-hour burden of completing each form CG–2692B.

*Estimate of Total Annual Burden:* The currently approved annual burden is 5,703 hours. Because the possible additional burden imposed by this proposed rule is estimated to be so minimal, it does not merit changing the approved annual burden.

As required by the Paperwork Reduction Act of 1995 (44 U.S.C. 3507(d)), we have submitted a copy of this proposed rule to the Office of Management and Budget (OMB) for its review of the collection of information.

We ask for public comment on the proposed collection of information to help us determine how useful the information is; whether it can help us perform our functions better; whether it is readily available elsewhere; how accurate our estimate of the burden of collection is; how valid our methods for determining burden are; how we can improve the quality, usefulness, and clarity of the information; and how we can minimize the burden of collection.

If you submit comments on the collection of information, submit them both to OMB and to the Docket Management Facility where indicated under **ADDRESSES,** by the date under **DATES.**

You need not respond to a collection of information unless it displays a currently valid control number from OMB. Before the requirements for this collection of information become effective, we will publish notice in the **Federal Register** of OMB's decision to approve, modify, or disapprove the collection.

**Federalism**

A rule has implications for federalism under Executive Order 13132, Federalism, if it has a substantial direct effect on State or local governments and would either preempt State law or impose a substantial direct cost of compliance on them. We have analyzed this proposed rule under that Order and have determined that it does not have implications for federalism. It is well settled that States may not regulate in categories reserved for regulation by the Coast Guard. It is also well settled, now, that all of the categories covered in 46 U.S.C. 3306, 3703, 7101, and 8101 (design, construction, alteration, repair, maintenance, operation, equipping, personnel qualification, and manning of vessels), as well as the reporting of casualties and any other category in which Congress intended the Coast Guard to be the sole source of a vessel's obligations, are within the field foreclosed from regulation by the States. (*See* the decision of the Supreme Court in the consolidated cases of *United States* v. *Locke and Intertanko* v. *Locke,* 529 U.S. 89, 120 S.Ct. 1135 (March 6, 2000).) Rules on testing merchant marine personnel for drugs and alcohol fall into the category of personnel qualification. Because the States may not regulate within this category, preemption under Executive Order 13132 is not an issue.

**Unfunded Mandates Reform Act**

The Unfunded Mandates Reform Act of 1995 (2 U.S.C. 1531–1538) requires Federal agencies to assess the effects of their discretionary regulatory actions. In particular, the Act addresses actions that may result in the expenditure by a

State, local, or tribal government, in the aggregate, or by the private sector of $100,000,000 or more in any one year. Though this proposed rule would not result in such an expenditure, we do discuss the effects of this rule elsewhere in this preamble.

**Taking of Private Property**

This proposed rule would not affect a taking of private property or otherwise have taking implications under Executive Order 12630, Governmental Actions and Interference with Constitutionally Protected Property Rights.

**Civil Justice Reform**

This proposed rule meets applicable standards in sections 3(a) and 3(b)(2) of Executive Order 12988, Civil Justice Reform, to minimize litigation, eliminate ambiguity, and reduce burden.

**Protection of Children**

We have analyzed this proposed rule under Executive Order 13045, Protection of Children from Environmental Health Risks and Safety Risks. This rule is not an economically significant rule and would not create an environmental risk to health or risk to safety that might disproportionately affect children.

**Indian Tribal Governments**

This proposed rule does not have tribal implications, will not impose substantial direct compliance costs on Indian tribal governments, and will not preempt tribal law. Therefore, it is exempt from the consultation requirements of Executive Order 13175. If tribal implications are identified during the comment period, we will undertake appropriate consultations with the affected Indian tribal officials.

**Energy Effects**

We have analyzed this rule under Executive Order 13211, Actions Concerning Regulations That Significantly Affect Energy Supply, Distribution, or Use. We have determined that it is not a "significant energy action" under that order because it is not a "significant regulatory action" under Executive Order 12866 and is not likely to have a significant adverse effect on the supply, distribution, or use of energy. It has not been designated by the Administrator of the Office of Information and Regulatory Affairs as a significant energy action. Therefore, it does not require a Statement of Energy Effects under Executive Order 13211.

**Environment**

We considered the environmental impact of this proposed rule and concluded that under figure 2–1, paragraph (34)(c), of Commandant Instruction M16475.lC, this rule is categorically excluded from further environmental documentation. A "Categorical Exclusion Determination" is available in the docket where indicated under **ADDRESSES.**

**List of Subjects in 46 CFR Part 4**

Administrative practice and procedure, Alcohol abuse, Drug abuse, Drug testing, Investigations, Marine safety, National Transportation Safety Board, Reporting and recordkeeping requirements, Safety, Transportation.

For the reasons discussed in the preamble, the Coast Guard proposes amending 46 CFR part 4 as follows:

## PART 4—MARINE CASUALTIES AND INVESTIGATIONS

1. The citation of authority for Part 4 is revised to read as follows:

**Authority:** 33 U.S.C. 1231; 43 U.S.C. 1333; 46 U.S.C. 2103, 2303a, 2306, 6101, 6301, and 6305; 50 U.S.C. 198; 49 CFR 1.46. Authority for subpart 4.40: 49 U.S.C. 1903(a)(1)(E); 49 CFR 1.46.

2. In § 4.06–1, in paragraph (b) add the phrase "as required in this part" at the end of the sentence, and revise paragraphs (c) and (d) as follows:

**§ 4.06–1 Responsibilities of the marine employer.**

* * * * *

(c) The determination of which individuals are directly involved in a serious marine incident (SMI) is to be made by the marine employer. A law enforcement officer may determine that additional individuals are directly involved in the SMI. In such cases, the marine employer shall take all practicable steps to have these additional individuals tested in accordance with this part.

(d) The requirements of this subpart do not prevent personnel who are required to be tested from performing duties in the aftermath of a SMI when their performance is necessary to respond to safety concerns directly related to the incident.

* * * * *

3. Add § 4.06–3 to read as follows:

**§ 4.06–3 Requirements for alcohol and drug testing following a serious marine incident.**

When a marine employer determines that a casualty or incident is, or is likely to become, an SMI, the marine employer must ensure the following alcohol and drug testing is conducted:

(a) *Alcohol testing.* (1) Alcohol testing must be conducted on each individual engaged or employed on board the vessel who is directly involved in the SMI.

(i) The alcohol testing of each individual must be conducted within two (2) hours of when the SMI occurred, unless precluded by safety concerns directly related to the incident.

(ii) If safety concerns directly related to the SMI prevented the alcohol testing from being conducted within 2 hours of the occurrence of the incident, then alcohol testing must be conducted as soon as the safety concerns are addressed.

(iii) Alcohol testing is not required to be conducted more than eight (8) hours after the occurrence of the SMI.

(2) Alcohol-testing devices must be used in accordance with procedures specified by the manufacturer of the testing device and this part.

(3) If the alcohol testing required in paragraphs (a)(1)(i) and (a)(1)(ii) of this section is not conducted, the marine employer must document on form CG–2692B the reason the test(s) was not conducted.

(4) The marine employer may use alcohol testing results from tests conducted by Coast Guard or local law enforcement personnel to satisfy the alcohol-testing requirements of this part only if the alcohol testing meets all of the requirements of this part.

(b) *Drug testing.* (1) Drug testing must be conducted on each individual engaged or employed on board the vessel who is directly involved in the SMI.

(i) The drug testing of each individual must be conducted within thirty-two (32) hours of when the SMI occurred, unless precluded by safety concerns directly related to the incident.

(ii) If safety concerns directly related to the SMI prevented the drug testing from being conducted within 32 hours of the occurrence of the incident, then drug testing must be conducted as soon as the safety concerns are addressed.

(2) Specimen collection and shipping kits used to conduct drug testing must be used in accordance with 49 CFR part 40.

(3) If the drug test required in paragraphs (b)(1)(i) and (b)(1)(ii) of this section is not conducted, the marine employer must document on form CG–2692B the reason the drug test was not conducted.

4. Revise § 4.06–5 to read as follows:

**§ 4.06–5 Responsibility of individuals directly involved in serious marine incidents.**

(a) Any individual engaged or employed on board a vessel who is determined to be directly involved in a SMI must provide blood, breath, saliva, or urine specimens for chemical testing required by § 4.06–20 when directed to do so by the marine employer or a law enforcement officer.

(b) If the individual refuses to provide blood, breath, saliva, or urine specimens, this refusal must be noted on form CG–2692B and in the vessel's official log book, if one is required. The marine employer must remove the individual from duties that directly affect the safe operation of the vessel as soon as practicable.

(c) Individuals subject to alcohol testing after an SMI are prohibited from consuming alcohol beverages for eight (8) hours following the occurrence of the SMI, or until after the alcohol testing required by this part is completed.

(d) No individual may be compelled to provide specimens for alcohol and drug testing required by this part; however, refusal is a violation of regulations and may subject the individual's to suspension and revocation proceedings under part 5 of this chapter and/or a civil penalty.

**§ 4.06–10 [Removed]**

5. Remove § 4.06–10.

6. Add § 4.06–15 to read as follows:

**§ 4.06–15 Availability of chemical testing devices.**

(a) *Alcohol testing.* The marine employer must have sufficient devices capable of determining the presence of alcohol in an individual's system onboard the vessel for use to meet the alcohol testing requirements found under § 4.06–3 of this part.

(b) *Drug testing.* The marine employer must have urine specimen collection and shipping kits meeting the requirements of 49 CFR part 40 that are readily available for use following SMIs. The specimen collection and shipping kits need not be carried aboard each vessel if obtaining the kits and conducting the required drug tests can be completed within 32 hours from the time of the occurrence of the SMI.

7. Revise § 4.06–20 to read as follows:

**§ 4.06–20 Specimen collection requirements.**

(a) *Alcohol testing.* (1) When conducting alcohol testing required in § 4.06–3(a), an individual determined under this part to be directly involved in the SMI must provide a specimen of their breath, blood, or saliva to the marine employer as required in this subpart.

(2) Collection of an individual's blood to comply with § 4.06–3(a) must be taken only by qualified medical personnel.

(3) Collection of an individual's saliva or breath to comply with § 4.06–3(a) must be taken only by personnel trained to operate the alcohol-testing device in use and must be conducted in accordance with this subpart.

(b) *Drug testing.* When conducting drug testing required in § 4.06–3(b), an individual determined under this part to be directly involved in the SMI must provide a specimen of their urine in accordance with 46 CFR part 16 and 49 CFR part 40.

8. Add § 4.06–70 to read as follows:

**§ 4.06–70 Penalties.**

Violation of this part is subject to the civil penalties set forth in 46 U.S.C. 2115.

Dated: February 24, 2003.

**Thomas H. Collins,**

*Admiral, U.S. Coast Guard, Commandant.*

[FR Doc. 03–4809 Filed 2–27–03; 8:45 am]

BILLING CODE 4910–15–P

## DEPARTMENT OF DEFENSE

### 48 CFR Parts 232 and 252

**[DFARS Case 2002–D017]**

### Defense Federal Acquisition Regulation Supplement; Payment Withholding

**AGENCY:** Department of Defense (DoD).

**ACTION:** Proposed rule with request for comments.

**SUMMARY:** DoD is proposing to amend the Defense Federal Acquisition Regulation Supplement (DFARS) to remove the requirement that a contracting officer withhold 5 percent of the payments due under a time-and-materials or labor-hour contract unless otherwise prescribed in the contract Schedule. The proposed rule would permit, but not require, the administrative contracting officer (ACO) to withhold payment amounts if the ACO determines the withholding to be necessary to protect the Government's interests.

**DATES:** DoD will consider all comments received by April 29, 2003.

**ADDRESSES:** Respondents may submit comments directly on the World Wide Web at *http://emissary.acq.osd.mil/dar/dfars.nsf/pubcomm*. As an alternative, respondents may e-mail comments to: *dfars@acq.osd.mil*. Please cite DFARS Case 2002–D017 in the subject line of e-mailed comments.

Respondents that cannot submit comments using either of the above methods may submit comments to: Defense Acquisition Regulations Council, Attn: Ms. Sandra Haberlin, OUSD(AT&L)DPAP(DAR), IMD 3C132, 3062 Defense Pentagon, Washington, DC 20301–3062; facsimile (703) 602–0350. Please cite DFARS Case 2002–D017.

At the end of the comment period, interested parties may view public comments on the World Wide Web at *http://emissary.acq.osd.mil/dar/dfars.nsf.*

**FOR FURTHER INFORMATION CONTACT:** Ms. Sandra Haberlin, (703) 602–0289.

**SUPPLEMENTARY INFORMATION:**

#### A. Background

Federal Acquisition Regulation (FAR) 52.232–7, Payments under Time-and-Materials and Labor-Hour Contracts, requires the contracting officer to withhold 5 percent of the amounts due, up to a maximum of $50,000, unless otherwise specified in the contract Schedule. The Government retains the withheld amount until the contractor executes and delivers, at the time of final payment, a release discharging the Government from all liabilities, obligations, and claims arising under the contract.

This rule proposes to add DFARS 232.111(b) and DFARS 252.232–7XXX, Alternate A, to specify that, normally, there should be no need to withhold payments when dealing with contractors that typically comply with contractual requirements in a timely manner. This is in contrast to the current requirement in time-and-materials and labor-hour contracts that contracting officers must withhold payments unless other direction is provided in the contract.

DoD is considering revising its policy because the current withholding provisions are administratively burdensome and may, in some situations, result in the withholding of amounts that exceed reasonable amounts needed to protect the Government's interests. In addition, the contractor is already incentivized to execute and deliver the release discharging the Government from all liabilities, obligations, and claims under the contract, since this release is a condition for final payment.

This rule was not subject to Office of Management and Budget review under Executive Order 12866, dated September 30, 1993.

**Exhibit D**

235149

U.S. Department of Transportation
United States Coast Guard

USCG-2001-8773-2

# Marine Casualties and Investigations; Chemical Testing Following Serious Marine Incidents

***Draft Regulatory Analysis for Notice of Proposed Rulemaking***

*Prepared by:*

United States Coast Guard

Office of Standards Evaluation and Development (G-MSR)

Standards Evaluation and Analysis Division

USCG-2001-8773

December 19, 2002

United States Coast Guard Headquarters
2100 Second Street SW
Washington, DC 20593-0001

# Marine Casualties and Investigations; Chemical Testing Following Serious Marine Incidents

## Table of Contents

# Marine Casualties and Investigations; Chemical Testing Following Serious Marine Incidents

## EXECUTIVE SUMMARY

This Draft Regulatory Analysis is designed to provide supporting data and analysis for the Regulatory Evaluation section of the notice of proposed rulemaking (NPRM) entitled *Marine Casualties and Investigations: Chemical Testing Following Serious Marine Incidents.*

The proposed rule would revise the requirements for alcohol and drug testing following a serious marine incident (SMI). The proposed revision would establish procedures to ensure that alcohol testing be conducted within 2 hours of a serious marine incident, as required by the Coast Guard Authorization Act of 1998. It would require marine employers to have alcohol-testing device(s) readily available to facilitate compliance with the testing requirements. Any of the devices listed on the National Highway Traffic Safety Administration (NHTSA) Conforming Products Lists can be used. In addition, minor procedural changes to the drug testing regulations are also proposed.

There are more than 183,400 commercial vessels that would be required to comply with the Coast Guard's requirements for alcohol and drug testing following an SMI. Of these, about 2,600 vessels are already required to carry alcohol breath-testing devices because they undertake international voyages. Since these vessels carry breath-testing devices on board, the marine employers can already meet the statutory alcohol-testing timeframe and proposed requirements without additional cost. Thus, the number of additional vessels affected by the rulemaking would be about 180,800.

The cost of the rulemaking is estimated by assuming that, of the available alcohol breath or saliva-testing devices listed in the NHTSA's Conforming Products Lists, 90 percent of vessels choose the less costly saliva alcohol screening devices, while 10 percent of vessels choose breath alcohol screening devices. No vessels are assumed to choose evidential breath measurement devices because of their much higher initial and maintenance costs.

The additional cost to industry over 10 years is estimated to be approximately $144 million. An analysis of the impact of the rule on small entities found that while more than 3,500 entities could be affected, the impact on these would not be significant.

The proposed timeframe and carriage requirements serve as additional deterrents from crewmembers using alcohol and illegal drugs while working on board a commercial vessel. Also, the proposed rule would provide more accurate information relating to the role alcohol and illegal drugs play in serious marine incidents.

# Marine Casualties and Investigations; Chemical Testing Following Serious Marine Incidents

## PURPOSE

This Draft Regulatory Analysis is designed to provide supporting data and analysis for the Regulatory Evaluation section of the notice of proposed rulemaking (NPRM) entitled *Marine Casualties and Investigations; Chemical Testing Following Serious Marine Incidents.*

## BACKGROUND

The current regulations in 46 CFR 4.06-1 require marine employers to take all practicable steps after a serious marine incident (SMI)[1] to ensure that chemical testing is conducted. The regulations do not specify a time requirement for completing the tests for alcohol or for dangerous drugs following an SMI. Without a specified timeframe to conduct alcohol or drug testing after an SMI, in some instances tests were not conducted, and in other instances tests were not completed soon enough for the results to provide a determination of whether alcohol was present in an individual's system at the time the SMI occurred.

In 1998, Congress passed Public Law 105-383 which revised Title 46, U.S. Code, by adding a new section 2303a – "Post serious marine casualty alcohol testing" (hereafter § 2303a). Section 2303a requires the Coast Guard to establish procedures ensuring that after a serious marine casualty occurs, required alcohol testing is conducted no later than two hours after the casualty occurred. If the alcohol testing cannot be conducted within that timeframe because of safety concerns directly related to the casualty, § 2303a requires the alcohol testing to be conducted as soon thereafter as the safety concerns have been adequately addressed to permit such testing. However, § 2303a prohibits the Coast Guard from requiring alcohol testing to be conducted more than eight hours after the casualty occurs.

The Coast Guard requires that alcohol and drug testing be conducted after a serious marine incident. Section 2303a uses the term "serious marine casualty." For the purpose of the rulemaking serious marine casualty means the same as serious marine incident (SMI) as defined in 46 CFR 4.03-2. Section 2303a also uses the phrase "safety concerns directly related to the casualty" as the only reason the marine employer may postpone alcohol testing following an SMI.

[1] Defined in 46 CFR 4.03-2. In general, this includes the following events involving a vessel in commercial service: (1) any marine casualty or accident which results in 1 or more deaths; an injury to a crewmember, passenger, or other person that requires medical treatment beyond first aid; damage to property in excess of $100,000; actual or constructive total loss of any vessel subject to inspection; (2) a discharge of oil of 10,000 gallons or more; and (3) a discharge of a reportable quantity of hazardous substance into the navigable waters of the United States.

The rule would provide that alcohol testing requirements after an SMI will not prevent personnel who are required to be tested for alcohol from performing duties in the aftermath of an SMI when their performance is necessary for the preservation of life or property or the protection of the environment.

Coast Guard regulations in 46 CFR part 4 mandating alcohol testing after an SMI currently require marine employers to collect blood or breath specimens from each individual who was directly involved in the SMI, and for breath specimens, to use an alcohol breath-testing device that can accurately determine the presence of alcohol in an individual's system. The regulations also require inspected vessels certificated for unrestricted oceans routes and inspected vessels certificated for restricted overseas routes to have onboard at all times an alcohol breath-testing device capable of determining the presence of alcohol in an individual's system. The voyages of oceangoing vessels take the vessel and its crew far from shore-based facilities where alcohol testing can be conducted. If an SMI were to occur during the voyage, the vessel would not be able to return to a shore-based facility soon enough to complete alcohol testing for the results to indicate whether alcohol was present in an individual's system at the time the SMI occurred. Requiring marine employers to have testing devices onboard these vessels at all times makes it possible for them to ensure that proper alcohol testing is conducted in a timely manner.

Section 2303a applies to all commercial vessels. The majority of these vessels are not currently required to carry alcohol-testing devices on board the vessel. A regulatory requirement to conduct testing within the statutory timeframes cannot, by itself, ensure that alcohol testing after an SMI will be done within 2 hours. For the same reason we currently require oceangoing vessels to carry alcohol breath-testing devices onboard at all times, all other commercial vessels should also carry testing devices onboard their vessels. Having the devices onboard would make it possible for a marine employer to conduct the required alcohol testing within two hours after the occurrence of an SMI.

Given a choice between Evidential Breath Testing (EBT) devices or breath Alcohol Screening Devices (ASDs), we believe that most commercial vessel owners and operators would elect to carry breath ASDs for determining the presence of alcohol in an individual's system. Our assumption is based on the cost differential between the more expensive EBT and less expensive breath ASD. However, the cost of the less expensive breath ASD could still be too expensive for the smallest commercial vessel owners and operators. Providing vessel owners and operators with a wider variety of alcohol-testing devices to choose from would give them more control over the cost of compliance. Therefore, we are proposing to allow commercial vessel owners or operators to carry either breath or saliva ASDs to satisfy the requirement to carry alcohol-testing devices onboard their vessels.

## DISCUSSION OF PROPOSED RULE

### Statutory Time Requirements for Alcohol Testing After an SMI

The Coast Guard proposes adding § 4.06-3, "Requirements for alcohol and drug testing following a serious marine incident," which would require commercial vessel marine employers to conduct alcohol testing within two hours after an SMI, unless precluded by safety concerns directly related to the casualty, as mandated by § 2303a. If alcohol testing is not completed within two hours based on this exception, it must be done within eight hours of the casualty. An explanation on the casualty report form CG-2692B would be required for alcohol testing that is not completed within the prescribed two-hour timeframe, and an additional explanation would be required when testing is not completed within the eight-hour timeframe.

Also, the notice proposes adding a provision in this section requiring drug testing be conducted as soon as possible after an SMI but no later than 32 hours after its occurrence. We would require the same type of explanation on the casualty reporting form when drug testing is not completed within the prescribed times as when alcohol testing is not completed within provided timeframes.

### Responsibility of Individuals Directly Involved in SMIs

The proposed rulemaking would amend § 4.06-5, "Responsibility of individuals directly involved in serious marine incidents," so that individuals subject to alcohol testing after an SMI would be prohibited from consuming alcoholic beverages for eight hours following the SMI, or until after the required alcohol testing is completed.

### Adding a Requirement to Carry Alcohol-testing Devices

The proposed rulemaking would add § 4.06-15, "Availability of chemical testing devices," which would require marine employers to have sufficient breath- or saliva-alcohol testing devices capable of determining the presence of alcohol in an individual's system on board vessels. This requirement would make it possible for owners and operators to comply with the statute's two-hour timeframe for alcohol testing.

The proposed rulemaking would also move § 4.06-20(b), which requires commercial vessel owners and operators to have drug-testing kits readily available for use following an SMI, to this new section.

### Allowing Use of Saliva-Alcohol Testing Devices

To prevent a redundancy, the proposed rulemaking would move the specimen collection requirements in § 4.06-10 to the specimen collection requirements in § 4.06-20. It will also propose including saliva, along with blood and breath, as specimens that can be collected for alcohol testing. For alcohol

testing conducted aboard vessels, it would allow vessel owners and operators to choose any breath- or saliva-alcohol testing device that can determine the presence of alcohol in a individual's system. For drug testing, we will keep the current requirement for testing kits complying with 49 CFR part 40.

## Delay of Implementation

The proposed rule would have a delayed implementation date of 180 days to ensure that all marine employers subject to a new carriage requirement have ample time to procure and learn how to use the required equipment.

## ASSESSMENT

This proposed rule is not a "significant regulatory action" under Section 3(f) of Executive Order 12866 and does not require an assessment of potential costs and benefits under Section 6(a)(3) of that Order. It is, however, considered "significant" under the regulatory policies and procedures of the Department of Transportation (DOT) (44 FR 11040, February 26, 1979). A draft regulatory assessment of the benefits and costs of the rulemaking is below.

## Benefits

The Act mandates that alcohol testing must be conducted within 2 hours of an SMI. The proposal would establish a requirement for all commercial vessels to have alcohol testing devices readily available to comply with the testing requirements. The statutory time limit and the expanded carriage requirement serve as additional deterrents from crewmembers using alcohol and illegal drugs while working on a commercial vessel.

As required by 46 C.F.R. §4.05-10, form CG-2692 must be completed after each SMI. Test results are reported on this form. The proposed rule would require that the test be conducted within 2 hours of the incident, whereas under the current regulation the time that elapses following the incident and when the test is conducted can not be determined. The proposal would provide more accurate information relating to the role alcohol and illegal drugs play in SMIs.

## Costs

The cost estimate for the rulemaking is approximately $144 million. The assumptions for this estimate are explained below and are followed by the methodology and analysis.

### *Assumptions*

1. The rule would become effective in the year 2003. This analysis includes costs up to and including the year 2012 (10 years).

2. All dollar values are discounted to 2002 present value at a 7 percent discount rate.

3. An estimated 180,819 vessels would be required to comply with the proposed requirement (80,819 documented vessels + 100,000 undocumented vessels).

4. Although some of these 180,819 vessels would be within 2 hours of access to the shore and would thus not have to carry alcohol-testing devices on board, this analysis makes the conservative assumption that all these vessels would comply with the carriage requirement in the proposed rulemaking. This assumption is made primarily because it is difficult to estimate the number of vessels that would be more than 2 hours away from land.

5. The proposed rule would allow employers to choose the most cost effective testing equipment. For the purposes of analysis, this analysis assumes that employers will choose a device listed in the National Highway Transit Safety Administration (NHTSA) "Conforming Products List of Alcohol Screening Devices"[2] or the "Conforming Products List of Evidential Breath Measurement Devices."[3] See Appendix A for a comparison of alcohol tests considered in the development of the proposed rule.

6. The prices for alcohol screening devices used in this analysis are $97 for saliva ASDs and $393 for breath ASDs, based on a survey. This analysis also assumes that the prices for these products would remain constant.

7. The proportion of vessel owners that choose saliva ASDs to conduct breath-testing following SMIs is 90 percent, while 10 percent choose to use breath ASDs. Saliva ASDs are considerably cheaper, with lower initial costs.

8. No vessel owners select EBTs because of their much higher cost

9. Each type of device would require specific training for its use. Each vessel would annually train 4 mariners to use the testing device for the first year the regulation is in effect. For each following year, each vessel would train 2 mariners to use the testing device.

10. Training would be conducted by another mariner that is a member of each vessel's crew or by a trained professional.

11. Training would take ½ hour to learn how to appropriately use saliva ASDs, and 1 hour for breath ASDs.

12. The cost per mariner to be trained, trainer, or professional would be $35 per hour.

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[2] The latest version was published in the Federal Register (66 FR 22639, May 4, 2001). Other subsequent versions may be published by NHTSA.
[3] The latest version was published in the Federal Register (65 FR 45419, July 2 1, 2000). Other subsequent versions may be published by NHTSA.

13. Saliva ASDs would be replaced every other year, whereas breath ASDs need not be replaced for the 10-year period of the analysis.[4]

***Affected Population***

The proposed rule would affect all vessels used for commercial purposes. A query of the Coast Guard's Marine Safety Management System (MSMS) database revealed that there are 83,400 commercial vessels[5] documented with the Coast Guard as of April 2001. Of these, about 2,600 vessels are already required to carry alcohol breath-testing devices because they engage on international voyages, are documented, and are inspected by the Coast Guard. An additional 80,800 documented vessels identified by MSMS would, therefore, be required to meet the proposed requirement (See Table 1 for exact figures).

Commercial vessels less than 5 gross tons are not required to be documented with the Coast Guard, but would be required to comply with the proposed rule. The Coast Guard estimates that about 100,000 vessels currently operate in U.S. waters for commercial purposes, and documentation is not required on these vessels. This includes about 63,000 undocumented fishing vessels, as estimated by the Port and Facility Compliance Division (G-MOC-3). This analysis uses the affected population of 180,819 vessels (80,819 documented commercial vessels + 100,000 undocumented commercial vessels) as shown in Table 1.

**Table 1: Affected Population**

| Type of Vessels | Number of Vessels |
|---|---|
| Total documented vessels. | 83,411 |
| Documented vessels that already carry a device. | 2,592 |
| Additional documented vessels that would be required to carry a device by the proposed rule.[6] | 80,819 |
| Undocumented commercial vessels that would be required to comply with the proposed rule.[7] | 100,000 |
| Total number of commercial vessels that would be required to comply with the proposed rule.[8] | 180,819 |

***Prices for Testing Equipment and Training***

Prices for testing equipment were derived through a survey of the products listed in the NHTSA Conforming Products Lists. This analysis uses the median prices for saliva ASDs. Table 2 below shows the prices for saliva and breath ASDs as quoted to the Coast Guard. These are the types of equipment that most vessels would likely carry. See Appendix B for prices on EBT devices.

[4] Saliva ASDs are moisture sensitive. Protective coatings or sealants may deteriorate or become weathered with time. Also, some saliva ASDs become inactive after freezing. For these reasons, it is reasonable to assume that saliva ASDs would need to be replaced every 2 years.
[5] This estimate excludes vessels whose service is categorized as "Recreational."
[6] "Total documented vessels" minus "Documented vessels that already carry a device."
[7] Coast Guard estimate.
[8] "Documented vessels that would be required to carry a device by the proposed rule" plus "Undocumented commercial vessels that would be required to comply with the proposed rule."

**Table 2: Prices for Alcohol Screening Devices**

| Product | Quoted Price and Assumption Notes | Price | |
|---|---|---|---|
| **Saliva Alcohol Screening Devices** | | | |
| Product A | $1.88 per stick<br>Sold in packages of 24. If vessel carries 24 sticks, then $45 per vessel. Would need to be replaced every 2 years. | $45 | |
| Product B | $3.86 per stick<br>Sold in packages of 25. If vessel carries 25 sticks, then $97 per vessel. Would need to be replaced every 2 years. | $97 | →Median |
| Product C | $5 to $7 per stick<br>If vessel carries 25 sticks, then $150 per vessel. Would need to be replaced every 2 years. | $150 | |
| **Breath Alcohol Screening Devices** | | | |
| Product D | $331 per device. No other equipment is needed for calibration. One device per vessel, and it would last for 10 years. | $331 | |
| Product E | $393 per device. No other equipment is needed for calibration. One device per vessel, and it would last for 10 years. | $393 | } Median |
| Product F | $393 per device. No other equipment is needed for calibration. One device per vessel, and it would last for 10 years. | $393 | |
| Product G | $487 per device. No other equipment is needed for calibration. One device per vessel, and it would last for 10 years. | $487 | |

Using the training assumptions listed above, the cost of training per vessel would be $88 for vessels that use saliva ASDs.[9] The cost of training per vessel would be $175 for vessels that use breath ASDs.[10] For each following year, vessels using saliva ASDs would retrain 2 new workers ($35 per vessel[11]), and vessels using breath ASDs would do the same ($105 per vessel[12]).

***Cost of Devices***

From the total affected population of 180,819 vessels, this analysis assumes that 90 percent choose saliva ASDs, and 10 percent choose breath ASDs. This analysis also assumes that no vessel owners select EBTs because

[9] Rounding up from $87.5 for 5 mariners (4 being trained and 1 performing the training) * 0.5 hours for training * $35 per hour.
[10] Using 5 mariners (4 being trained and 1 performing the training) * 1 hour for training * $35 per hour.
[11] Rounding up from $52.5 for 3 mariners (2 being trained and 1 performing the training) * 0.5 hours * $35 per hour.
[12] Using 3 mariners (2 being trained and 1 performing the training) * 1 hour * $35 per hour.

of their much higher cost.[13] The vessel population using saliva ASDs is calculated as 162,737 (180,819 × 0.9), and the vessel population using breath ASDs as 18,082 (180,819 × 0.1). Total cost to industry — with 90 percent of vessels using saliva ASDs and 10 percent using breath ASDs — is $144,371,261 (about $144 million) as depicted in Table 3.

**Table 3: Total Cost to Industry**
**(90 Percent of Affected Population Using Saliva ASDs, and 10 Percent of Affected Population Using Breath ASDs)**

| Device | Details | Cost |
|---|---|---|
| **Saliva ASD** | Testing device | 97 |
| | Training | 88 |
| | Initial Cost per Vessel | 185 |
| | **PV Cost for 90% of Vessels** | **123,211,952** |
| **Breath ASD** | Testing device | 393 |
| | Training | 175 |
| | Initial Cost per Vessel | 568 |
| | **PV Cost for 10% of Vessels** | **21,159,309** |
| **Total** | | **$ 144,371,261** |

The costs to commercial vessels acquiring saliva ASDs and breath ASDs, as well as their present values, are calculated and shown in Tables 4 and 5. Most of the cost is incurred in "Year 1" because the proposed rule does not have a phase-in period beyond 1 year.

[13] See section on "Other Alternatives Considered" for additional discussion.

**Table 4: Costs for Saliva ASDs**
**(90 Percent of Affected Population and Replacement Every Other Year)**

| Year | Detail of Costs | Costs | Present Value (2002 $) |
|---|---|---|---|
| Year 1 | Testing Device | 97 | |
| 2003 | Training | 88 | |
| | Annual Cost per Vessel | 185 | |
| | Cost for 90 Percent of Affected Population | $30,106,345 | $28,136,771 |
| Year 2 | Training Cost per Vessel | 53 | |
| 2004 | Cost for 90 Percent of Affected Population | 8,625,061 | 7,533,462 |
| Year 3 | Replacement Cost + Training per Vessel | 150 | |
| 2005 | Cost for 90 Percent of Affected Population | 24,410,550 | 19,926,280 |
| Year 4 | Training Cost per Vessel | 53 | |
| 2006 | Cost for 90 Percent of Affected Population | 8,625,061 | 6,580,018 |
| Year 5 | Replacement Cost + Training per Vessel | 150 | |
| 2007 | Cost for 90 Percent of Affected Population | 24,410,550 | 17,404,385 |
| Year 6 | Training Cost per Vessel | 53 | |
| 2008 | Cost for 90 Percent of Affected Population | 8,625,061 | 5,747,242 |
| Year 7 | Replacement Cost + Training per Vessel | 150 | |
| 2009 | Cost for 90 Percent of Affected Population | 24,410,550 | 15,201,664 |
| Year 8 | Training Cost per Vessel | 53 | |
| 2010 | Cost for 90 Percent of Affected Population | 8,625,061 | 5,019,864 |
| Year 9 | Replacement Cost + Training per Vessel | 150 | |
| 2011 | Cost for 90 Percent of Affected Population | 24,410,550 | 13,277,722 |
| Year 10 | Training Cost per Vessel | 53 | |
| 2012 | Cost for 90 Percent of Affected Population | 8,625,061 | 4,384,544 |
| | **Total Cumulative Present Value** | | **$123,211,952** |

**Table 5: Costs for Breath ASDs**
**(10 Percent of Affected Population)**

| Year | Detail of Costs | Costs | Present Value (2002 $) |
|---|---|---|---|
| Year 1 | Testing device | 393 | |
| 2003 | Training | 175 | |
| | Initial Cost per Vessel | 568 | |
| | Cost for 10 Percent Affected Population | $10,270,576 | $9,598,669 |
| Year 2 | Retraining per vessel | 105 | |
| 2004 | Total Retraining | 1,898,610 | 1,658,320 |
| Year 3 | Retraining | 105 | |
| 2005 | Total Retraining | 1,898,610 | 1,549,831 |
| Year 4 | Retraining | 105 | |
| 2006 | Total Retraining | 1,898,610 | 1,448,440 |
| Year 5 | Retraining | 105 | |
| 2007 | Total Retraining | 1,898,610 | 1,353,683 |
| Year 6 | Retraining | 105 | |
| 2008 | Total Retraining | 1,898,610 | 1,265,124 |
| Year 7 | Retraining | 105 | |
| 2009 | Total Retraining | 1,898,610 | 1,182,359 |
| Year 8 | Retraining | 105 | |
| 2010 | Total Retraining | 1,898,610 | 1,105,008 |
| Year 9 | Retraining | 105 | |
| 2011 | Total Retraining | 1,898,610 | 1,032,718 |
| Year 10 | Retraining | 105 | |
| 2012 | Total Retraining | 1,898,610 | 965,157 |
| | **Total Cumulative Present Value** | | **$21,159,309** |

***Government Costs***

This proposed rule should not have an adverse effect on Coast Guard resources. All Coast Guard law enforcement platforms and most Marine Safety Offices are equipped with readily accessible breath-testing devices and have personnel capable of using the equipment for alcohol testing. The rule would not require Coast Guard units to respond to the scene of every SMI to conduct the required alcohol testing because doing so would burden resources already engaged in other missions such as search and rescue, drug interdiction, migrant interdiction, marine safety, and environmental protection.

Although it is impractical to make the Coast Guard responsible for testing mariners in every SMI, it is not unreasonable to expect the Coast Guard to conduct alcohol testing if investigators arrive on scene within the prescribed timeframe and are properly equipped with alcohol testing devices. This practice would not have an overly burdensome effect on Coast Guard resources.

## ALTERNATIVES CONSIDERED TO THE PROPOSED RULE

For the rulemaking, two other alternatives were considered. One alternative would have required all vessels to carry EBTs, listed in the NHTSA "Conforming Products List of Evidential Breath Measurement Devices." The cost of this alternative would be about $650 million in present value over 10 years. Because EBTs have high initial costs as well as related equipment supplies costs over the 10 years of the analysis, the total cost of this alternative is extremely high. The median cost for the initial purchase of an EBT device is $2,621, and equipment supplies need to be replaced every 2.5 years. This means that if the devices were purchased on 1 January 2003 (Year 1), then there would be equipment supplies costs incurred on 1 July 2005 (Year 3), 1 January 2008 (Year 6), and 1 July 2010 (Year 8). Because of the extreme cost associated with the procurement and maintenance of EBTs, this alternative was dismissed.

The other regulatory alternative considered would have allowed commercial vessel owners or operators to carry either EBTs or breath ASDs[14] listed on the NHTSA "Conforming Products List of Alcohol Screening Devices" on board the vessel to meet a carriage requirement and the statutory time requirement. Using EBTs or breath ASDs (effectively excluding all saliva ASDs) would cost approximately $212 million. The cost estimate assumes that all vessels choose breath ASDs because EBTs have a much higher cost than breath ASDs both in procurement and in maintenance. Given the choice of carrying EBTs or breath ASDs, vessel owners will most likely select to carry breath ASDs. The median cost for the initial purchase of a breath ASD device is $393.

Within this second alternative, there was some debate as to whether saliva ASDs should be allowed, or whether only breath ASDs should be allowed. After an analysis of the costs associated with using only breath ASDs, it was

[14] Breath ASDs include only devices that use br eath as means to detect the presence of alcohol, but its results are not admissible as evidence a in court of a law.

decided that saliva ASDs should be allowed, as their lower cost and facility of use would result in lower overall costs to industry. This would add saliva as an additional method of alcohol testing. Restricting commercial vessels to carry a device to test a person's blood or breath for the presence of alcohol forces a sizeable cost on vessel owners or operators. Because the cost of saliva ASDs is lesser than breath ASDs or EBTs, this alternative is the least costly while providing the widest selection of testing devices. The chosen alternative allows for the use of saliva ASDs and costs $144 million, as described earlier. For lowest and highest cost estimates, see Appendix C.

## SMALL ENTITIES

Under the Regulatory Flexibility Act [5 U.S.C. 601 et seq.], the Coast Guard considered whether this proposed rule, if adopted, would have a significant economic impact on a substantial number of small entities. "Small entities" include small businesses, not-for-profit organizations that are independently owned and operated and are not dominant in their fields, and governmental jurisdictions with populations of less than 50,000.

The rule affects approximately 3,500 small entities, based on the determination made by the Small Business Administration (SBA) in the North American Industry Classification System (NAICS codes 4831, 4832, 4872, 48831, 48832, 48833).[15] The SBA defines small entities either by revenue size or by employee size for all NAICS sectors. Firms with revenues less than $5 million and firms with fewer than 500 employees are defined as Small Entities. For the NAICS sectors and sub-sectors that apply to this analysis, SBA defined NAICS Codes 4831 (Deep Sea, Coastal, & Great Lakes water transportation) and 4832 (Inland Water Transportation) by employee size and the rest by revenue size. Those sectors defined by revenue size are: Scenic & Sightseeing Transportation (water), Port & Harbor Operations, Marine Cargo Handling, and Navigational Services to Shipping.

To determine the impact of the cost of the rule on these companies, the following assumptions were made:

- Firms with revenues less than $499,999 or employ fewer than 20 employees own 5 vessels.
- Firms with revenues in the range of $500,000 to $5 million or employ 20 to 500 employees own 10 vessels.

Using the per-vessel cost from Table 3 and the assumptions above, a cost estimate per company can be calculated. This is shown in Table 6 below.

[15] Please see Appendix D for more detailed information and calculations.

**Table 6: Cost Incurred per Company**

| | Using Saliva ASDs | | Using Breath ASDs | |
|---|---|---|---|---|
| | Initial Cost ($) | Recurring Cost ($) | Initial Cost ($) | Recurring Cost ($) |
| **Cost Per Vessel** | 185 | 150 | 568 | 105 |
| **For a Company that owns 5 vessels** | 925 | 750 | 2,840 | 525 |
| **For a Company that owns 10 vessels** | 1,850 | 1,500 | 5,680 | 1,050 |

The cost impact of selecting either breath ASDs or saliva ASDs can be calculated, and it is shown in Table 7. Costs would be a very small percentage of revenues for almost all companies. The initial cost burden is up to 6.12 percent of revenues for companies owning 5 vessels and using breath ASDs. However, it is reasonable to assume that under these circumstances the companies in question would select saliva ASDs, which would be a much smaller burden to them.

**Table 7: Cost Burden as a Percentage of Annual Revenues for Small Entities**

| For a Company that owns: | | Using Saliva ASDs | | Using Breath ASDs | |
|---|---|---|---|---|---|
| | | Initial | Recurring | Initial | Recurring |
| **5 vessels** | **Cost** | $925 | $750 | $2,840 | $525 |
| | **Impact (Cost / Average Revenue)** | 0.01% to 1.99% | 0.01% to 1.62% | 0.04% to 6.12% | 0.01% to 1.13% |
| **10 vessels** | **Cost** | $1,850 | $1,500 | $5,680 | $1,050 |
| | **Impact (Cost / Average Revenue)** | 0.002% to 0.41% | 0.001% to 0.33% | 0.01% to 1.25% | 0.001 to 0.23% |

Therefore, the Coast Guard certifies that this proposed rule would not have a significant economic impact on a substantial number of small entities under section 605(b) of the Regulatory Flexibility Act [5 U.S.C. 601 et seq.].

## COLLECTION OF INFORMATION

Under the Paperwork Reduction Act [44 U.S.C. 3501 et seq.], the Office of Management and Budget (OMB) reviews each proposed rule that contains a collection-of-information requirement to determine whether the practical value of the information is worth the burden imposed by its collection. Collection-of-

information requirements include reporting, recordkeeping, monitoring, notification, posting, labeling, and other similar actions. The information collection requirements are calculated for the standard 3-year period in accordance with OMB.

The proposed regulation would require marine employers to document the reason for delaying the alcohol test on form CG-2692B if testing were not completed within the 2-hour timeframe. If the alcohol test is not completed within the 8-hour timeframe, the marine employer must document the reason for the further delay of testing on form CG-2692B. The requirement to report this information would be promulgated in 46 CFR 4.06-3. We would accordingly revise form CG-2692B to record the results of all types of testing (blood, breath, saliva, etc.).

The proposed requirement could potentially change the burden of the previously approved collection (filling out form CG-2692B, OMB 2115-0003). The possible additional burden imposed by this proposed rule is estimated to be so minimal that it does not merit changing the approved collection (a couple of additional minutes whenever documentation is needed). OMB approved, on previous submissions, the one-hour burden of completing the forms needed to report a marine casualty (CG-2692, CG-2692A, and CG2692B). We estimate that about 6,000 forms are currently filled out on annual basis. With the proposed regulation in place, it would be very rare and unusual for the required test not to be conducted within the proposed timeframes.

## FEDERALISM

The carriage requirement proposed by the rulemaking should be viewed as an unfunded mandate and may have an effect on State or local governments. However, the rule does not impose a substantial cost of compliance on State or local governments and as such, does not have implications for Federalism under Executive Order 13132.

## UNFUNDED MANDATES

Under the Unfunded Mandate Reform Act (Pub. L. 104-4), the Coast Guard must consider whether the rule would result in an annual expenditure by state, local, and tribal governments, in the aggregate, or by the private sector, of $100 million (adjusted annually for inflation). The Act also requires (in Section 205) that the Coast Guard identify and consider a reasonable number of regulatory alternatives and, from those alternatives, select the least costly, cost-effective, or least burdensome alternative that achieves the objective of the rule.

## TAKING OF PRIVATE PROPERTY

The proposed rule would not effect a taking of private property or otherwise have taking implications under Executive Order 12630, Governmental Actions and Interference with Constitutionally Protected Property Rights.

## CONSULTATION AND COORDINATION WITH INDIAN TRIBAL GOVERNMENTS

The proposed rule will not have tribal implications; will not impose substantial direct compliance costs on Indian tribal governments; and will not preempt tribal law. Therefore, it is exempt from the consultation requirements of Executive Order 13175. If tribal implications are identified during the comment period the Coast Guard will undertake appropriate consultations with the affected Indian Tribal officials.

## CIVIL JUSTICE REFORM

The proposed rule meets applicable standards in sections 3(a) and 3(b)(2) of Executive Order 12988, Civil Justice Reform, to minimize litigation, eliminate ambiguity, and reduce burden.

## PROTECTION OF CHILDREN

The proposed rule has been analyzed under Executive Order 13045, Protection of Children from Environmental Health Risks and Safety Risks. The rule is not an economically significant rule and does not concern an environmental risk to health or risk to safety that may disproportionately affect children.

## ENERGY EFFECTS

The rule has been analyzed under Executive Order 13211, Actions Concerning Regulations that Significantly Affect Energy Supply, Distribution or Use. The proposed rule is not a "significant energy action" under that order because it is not a "significant regulatory action" under Executive Order 12866 and is not likely to have a significant adverse effect on the supply, distribution, or use of energy. The Administrator of the Office of Information and Regulatory Affairs has not designated the proposed rule as a significant energy action. Therefore, it does not require a Statement of Energy Effects under Executive Order 13211.

## ENVIRONMENT

The rulemaking would not have any environmental impact. Therefore, the Coast Guard concluded that under figure 2-1, paragraph (34) (c), of Commandant Instruction M16475.1C, the rule is categorically excluded from further environmental documentation.

# APPENDIX A: COMPARISON OF AVAILABLE ALCOHOL TESTS

| Alcohol Tests Available | Compliance w/ Regulations | Capabilities | Approximate Cost |
|---|---|---|---|
| Blood Test | Complies with regulations if completed by qualified medical personnel | • Can measure accurate breath alcohol content (BAC) of an individual<br>• Can be used as evidence in any proceeding<br>• Blood specimen must be taken by qualified medical personnel<br>• Invasive test | • $105 - $165 per test at a laboratory facility. |
| Breath-testing Device EBT | Complies with current regulations. | • DOT/NHTSA publishes list of EBTs on Conforming Products List<br>• Accurate level BAC<br>• Capable of printer hook up<br>• Portable<br>• Requires trained operator<br>• Requires calibration equipment<br>• Requires routine calibration and maintenance<br>• Can be used as evidence in any proceeding<br>• Non-invasive | • $429-$8,453 for EBT<br>• $225 for calibration equipment<br>• $140 per year for training<br>• $50 for disposable mouthpieces |

## APPENDIX A: COMPARISON OF ALCOHOL TESTS AVAILABLE (Continued)

| Alcohol Tests Available | Compliance w/ Regulations | Device Capabilities | Approximate Cost |
|---|---|---|---|
| Breath-testing Device ASD | Complies with regulations. | • Accurately detects the presence of alcohol<br>• Portable, some devices are disposable<br>• Can be used by any individual who can follow manufacturer's directions<br>• Can be used in CG administrative proceedings<br>• Non-invasive<br>• DOT/NHTSA list of approved breath screening devices | • Breath devices $331-$487<br>• $3 per ampulized crystal tube |
| Saliva ASD | Does not comply with current regulations (but was not an option when original regulations were instituted). Some saliva tests are approved by DOT/NHTSA as screening devices. | • DOT/NHTSA publishes list of alcohol screening devices Conforming Products List<br>• Accurately detects the presence of alcohol<br>• Portable<br>• Can be used by any person who can follow manufacturer's directions<br>• Can be used in CG administrative proceedings<br>• Disposable<br>• Non-invasive | $2 - $7 per saliva test device |

# APPENDIX B: PRICES OF ALCOHOL TESTING DEVICES

| Product | Quoted Price and Assumption Notes | Price | |
|---|---|---|---|
| **Saliva Alcohol Screening Devices** | | | |
| Product A | $1.88 per stick<br>Sold in packages of 24. If vessel carries 24 sticks, then $45 per vessel. Would need to be replaced every 2 years. | $45 | |
| Product B | $3.86 per stick<br>Sold in packages of 25. If vessel carries 25 sticks, then $97 per vessel. Would need to be replaced every 2 years. | $97 | →Median |
| Product C | $5 to $7 per stick<br>If vessel carries 25 sticks, then $150 per vessel. Would need to be replaced every 2 years. | $150 | |
| **Breath Alcohol Screening Devices** | | | |
| Product D | $331 per device. No other equipment is needed for calibration. One device per vessel, and it would last for 10 years. | $331 | |
| Product E | $393 per device. No other equipment is needed for calibration. One device per vessel, and it would last for 10 years. | $393 | Median |
| Product F | $393 per device. No other equipment is needed for calibration. One device per vessel, and it would last for 10 years. | $393 | |
| Product G | $487 per device. No other equipment is needed for calibration. One device per vessel, and it would last for 10 years. | $487 | |
| **Evidential Breath-testing Alcohol Devices** | | | |
| Product H | $429 per device, $50 for 250 mouthpieces, and $225 dry gas/regulator for calibration. One device per vessel, and it would last for 10 years. | $704 | |
| Product I | $575 per device, $50 for 250 mouthpieces, and $225 dry gas/regulator for calibration. One device per vessel, and it would last for 10 years. | $850 | |
| Product J | $490 per device, $44 for 200 mouthpieces, $425 simulator for calibration, $3 battery, $2 calibration screw driver, and $50 video. One device per vessel, and it would last for 10 years. | $1,014 | |
| Product K | $695 per device, $28 for 100 mouthpieces, and $330 dry gas/regulator for calibration. One device per vessel, and it would last for 10 years. | $1,053 | |
| Product L | $690 per device, $425 simulator for calibration, mouthpieces included, $3 battery, $2 calibration tool, and $50 video. One device per vessel, and it would last for 10 years. | $1,170 | |

# APPENDIX B: PRICES OF ALCOHOL TESTING DEVICES (Continued)

| Product | Quoted Price and Assumption Notes | Price | |
|---|---|---|---|
| **Evidential Breath-testing Alcohol Devices (Continued)** | | | |
| Product M | $1,799 per device, mouthpieces included, $225 dry gas/regulator for calibration, $14 printer ribbon and $33 tamper evident printing rolls. One device per vessel, and it would last for 10 years. | $2,071 | |
| Product N | $2,000 per device, $447 simulator, and $100 other supplies. All other needed equipment is included. One device per vessel, and it would last for 10 years. | $2,547 | |
| Product O | $2,349 per device, $225 dry gas/regulator for calibration, $14 printer ribbon, and $33 tamper evident printing rolls. All other needed equipment is included. One device per vessel, and it would last for 10 years. | $2,621 | →**Median** |
| Product P | $2,250 per device, $425 simulator, $45 printer battery $11 printer cartridge, $20 evidence tape, and $50 video. All other needed equipment is included. One device per vessel, and it would last for 10 years. | $2,801 | |
| Product Q | $2,250 per device, $425 simulator, $45 printer battery $11 printer cartridge, $20 evidence tape, and $50 video. All other needed equipment is included. One device per vessel, and it would last for 10 years. | $2,801 | |
| Product R | $2,250 per device, $425 simulator, $45 printer battery $11 printer cartridge, $20 evidence tape, and $50 video. All other needed equipment is included. One device per vessel, and it would last for 10 years. | $2,801 | |
| Product S | $2,885 per device, $225 dry gas/regulator for calibration, $14 printer ribbon, and $33 tamper evident rolls. All other needed equipment is included. One device per vessel, and it would last for 10 years. | $3,157 | |
| Product T | $3,675, $50 video, $6 slip printer paper, and $40 evidence tape. All other needed equipment is included. One device per vessel, and it would last for 10 years. | $3,771 | |
| Product U | $7,485 per device. All other needed equipment is included. One device per vessel, and it would last for 10 years. | $7,485 | |
| Product V | $8,453 per device. All other needed equipment is included. One device per vessel, and it would last for 10 years. | $8,453 | |

# APPENDIX C: COST CALCULATIONS FOR ALCOHOL TESTING DEVICES

**Table C-1: Summary of Cost Estimates for Alcohol Testing Devices (100 Percent of Vessels for Each Type and Price Cost of Device)**

| Device | Lowest Cost | | Median Cost | | Highest Cost | |
|---|---|---|---|---|---|---|
| **Saliva ASD** | Testing device | 45 | Testing device | 97 | Testing device | 150 |
| | Training | 88 | Training | 88 | Training | 88 |
| | Annual Cost per Vessel | 133 | Annual Cost per Vessel | 185 | Annual Cost per Vessel | 238 |
| | **PV Cost / All Vessels** | **$ 102,765,715** | **PV Cost to All Vessels** | **$ 136,902,252** | **PV Cost to All Vessels** | **$ 171,695,262** |
| **ASD** | Testing device | 487 | Testing device | 487 | Testing device | 487 |
| | Training | 175 | Training | 175 | Training | 175 |
| | Initial Cost per Vessel | 662 | Initial Cost per Vessel | 662 | Initial Cost per Vessel | 662 |
| | **PV Cost / All Vessels** | **$ 201,114,560** | **PV Cost to All Vessels** | **$ 211,591,923** | **PV Cost to All Vessels** | **$ 227,476,956** |
| **EBT** | Testing device | 429 | Testing device | 2,349 | Testing device | 8,453 |
| | Mouth pieces | 50 | Dry gas/regulator | 225 | | |
| | Dry gas/regulator | 225 | Printer Ribbon | 14 | | |
| | | | Evidence Tape | 33 | | |
| | Training | 175 | Training | 175 | Training | 175 |
| | Initial Cost per Vessel | 879 | Initial Cost per Vessel | 2,796 | Initial Cost per Vessel | 8,628 |
| | **PV Cost / All Vessels** | **$ 297,281,743** | **PV Cost / All Vessels** | **$ 649,509,364** | **PV Cost / All Vessels** | **$ 1,640,172,608** |

# APPENDIX C: COST CALCULATIONS FOR ALCOHOL TESTING DEVICES (Continued)

## Table C-2: Lowest Cost Estimate of Saliva ASDs for 100 Percent of Vessels and Replacement Every Other Year

| Year | Description of Costs | Cost | Present Value (2002 $) |
|---|---|---|---|
| **Year 1** | Testing device | 45 | |
| 2003 | Training | 88 | |
| | Annual Cost per Vessel | 133 | |
| | Cost for All Vessels | 24,048,927 | 22,475,633 |
| **Year 2** | Training Cost per Vessel | 53 | |
| 2004 | Cost for All Vessels | 9,583,407 | 8,370,519 |
| **Year 3** | Replacement Cost + Training per Vessel | 98 | |
| 2005 | Cost for All Vessels | 17,720,262 | 14,465,012 |
| **Year 4** | Training Cost per Vessel | 53 | |
| 2006 | Cost for All Vessels | 9,583,407 | 7,311,135 |
| **Year 5** | Replacement Cost + Training per Vessel | 98 | |
| 2007 | Cost for All Vessels | 17,720,262 | 12,634,302 |
| **Year 6** | Training Cost per Vessel | 53 | |
| 2008 | Cost for All Vessels | 9,583,407 | 6,385,829 |
| **Year 7** | Replacement Cost + Training per Vessel | 98 | |
| 2009 | Cost for All Vessels | 17,720,262 | 11,035,289 |
| **Year 8** | Training Cost per Vessel | 53 | |
| 2010 | Cost for All Vessels | 9,583,407 | 5,577,630 |
| **Year 9** | Replacement Cost + Training per Vessel | 98 | |
| 2011 | Cost for All Vessels | 17,720,262 | 9,638,648 |
| **Year 10** | Training Cost per Vessel | 53 | |
| 2012 | Cost for All Vessels | 9,583,407 | 4,871,718 |
| | **Total Cumulative Present Value** | | **$102,765,715** |

## Table C-3: Lowest Cost Estimate of Breath ASDs for 100 Percent of Vessels

| Year | Description of Costs | Costs | Present Value (2002 $) |
|---|---|---|---|
| **Year 1** | Testing Device | 487 | |
| 2003 | Training | 175 | |
| | Initial Cost per Vessel | 662 | |
| | Cost for Entire Vessel Population | 91,494,414 | 85,508,798 |
| **Year 2** | Retraining per Vessel | 105 | |
| 2004 | Total Costs per Vessel | 18,985,995 | 16,583,103 |
| **Year 3** | Retraining | 105 | |
| 2005 | Total Costs per Vessel | 18,985,995 | 15,498,227 |
| **Year 4** | Retraining | 105 | |
| 2006 | Total Costs per Vessel | 18,985,995 | 14,484,325 |
| **Year 5** | Retraining | 105 | |
| 2007 | Total Costs per Vessel | 18,985,995 | 13,536,752 |
| **Year 6** | Retraining | 105 | |
| 2008 | Total Costs per Vessel | 18,985,995 | 12,651,170 |
| **Year 7** | Retraining | 105 | |
| 2009 | Total Costs per Vessel | 18,985,995 | 11,823,523 |
| **Year 8** | Retraining | 105 | |
| 2010 | Total Costs per Vessel | 18,985,995 | 11,050,022 |
| **Year 9** | Retraining | 105 | |
| 2011 | Total Costs per Vessel | 18,985,995 | 10,327,123 |
| **Year 10** | Retraining | 105 | |
| 2012 | Total Costs per Vessel | 18,985,995 | 9,651,517 |
| | **Total Cumulative Present Value** | | **$201,114,560** |

# APPENDIX C: COST CALCULATIONS FOR ALCOHOL TESTING DEVICES (Continued)

**Table C-4: Lowest Cost Estimate of Evidential Breath-testing Devices for 100 Percent of Vessels**

| Year | Testing Devices & Training | Cost | Present Value (2002 $) |
|---|---|---|---|
| **Year 1** | Testing Device | 429 | |
| 2003 | Mouth Pieces | 50 | |
| | Dry Gas/Regulator | 225 | |
| | Training | 175 | |
| | Initial Cost per Vessel | 879 | |
| | Cost for Entire Vessel Population | 158,939,901 | 148,541,964 |
| **Year 2** | No Equipment Supplies Costs | - | |
| 2004 | Training Costs per Vessel | 105 | |
| | Cost for Entire Population | 18,985,995 | 16,583,103 |
| **Year 3** | No Equipment Supplies Costs | - | |
| 2005 | Training Costs per Vessel | 105 | |
| | Cost for Entire Population | 18,985,995 | 15,498,227 |
| **Year 4** | No Equipment Supplies Costs | - | |
| 2006 | Training Costs per Vessel | 105 | |
| | Cost for Entire Population | 18,985,995 | 14,484,325 |
| **Year 5** | No Equipment Supplies Costs | - | |
| 2007 | Training Costs per Vessel | 105 | |
| | Cost for Entire Population | 18,985,995 | 13,536,752 |
| **Year 6** | Mouthpieces | 50 | |
| 2008 | Replacement Cost for Dry Gas/Regulator | 225 | |
| | Training Costs per Vessel | 105 | |
| | Total Cost per Vessel | 380 | |
| | Cost for Entire Population | 68,711,220 | 45,785,187 |
| **Year 7** | No Equipment Supplies Costs | - | |
| 2009 | Training Costs per Vessel | 105 | |
| | Cost for Entire Population | 18,985,995 | 11,823,523 |
| **Year 8** | No Equipment Supplies Costs | - | |
| 2010 | Training Costs per Vessel | 105 | |
| | Cost for Entire Population | 18,985,995 | 11,050,022 |
| **Year 9** | No Equipment Supplies Costs | - | |
| 2011 | Training Costs per Vessel | 105 | |
| | Cost for Entire Population | 18,985,995 | 10,327,123 |
| **Year 10** | No Equipment Supplies Costs | - | |
| 2012 | Training Costs per Vessel | 105 | |
| | Cost for Entire Population | 18,985,995 | 9,651,517 |
| | **Total Cumulative Present Value** | | **$297,281,743** |

# APPENDIX C: COST CALCULATIONS FOR ALCOHOL TESTING DEVICES (Continued)

**Table C-5: Median Cost Estimate of Saliva ASDs for 100 Percent of Vessels and Replacement Every Other Year**

| Year | Description of Costs | Costs | Present Value |
|---|---|---|---|
| **Year 1** 2003 | Testing device | 97 | |
| | Training | 88 | |
| | Annual Cost per Vessel | 185 | |
| | Cost for All Vessels | 33,451,515 | 31,263,098 |
| **Year 2** 2004 | Training Cost per Vessel | 53 | |
| | Cost for All Vessels | 9,583,407 | 8,370,519 |
| **Year 3** 2005 | Replacement Cost + Training per Vessel | 150 | |
| | Cost for All Vessels | 27,122,850 | 22,140,325 |
| **Year 4** 2006 | Training Cost per Vessel | 53 | |
| | Cost for All Vessels | 9,583,407 | 7,311,135 |
| **Year 5** 2007 | Replacement Cost + Training per Vessel | 150 | |
| | Cost for All Vessels | 27,122,850 | 19,338,217 |
| **Year 6** 2008 | Training Cost per Vessel | 53 | |
| | Cost for All Vessels | 9,583,407 | 6,385,829 |
| **Year 7** 2009 | Replacement Cost + Training per Vessel | 150 | |
| | Cost for All Vessels | 27,122,850 | 16,890,748 |
| **Year 8** 2010 | Training Cost per Vessel | 53 | |
| | Cost for All Vessels | 9,583,407 | 5,577,630 |
| **Year 9** 2011 | Replacement Cost + Training per Vessel | 150 | |
| | Cost for All Vessels | 27,122,850 | 14,753,033 |
| **Year 10** 2012 | Training Cost per Vessel | 53 | |
| | Cost for All Vessels | 9,583,407 | 4,871,718 |
| | **Total Cumulative Present Value** | | **$136,902,252** |

**Table C-6: Median Cost Estimate of Breath ASDs for 100 Percent of Vessels**

| Year | Description of Costs | Costs | Present Value (2002 $) |
|---|---|---|---|
| **Year 1** 2003 | Testing Device | 487 | |
| | Training | 175 | |
| | Initial Cost per Vessel | 662 | |
| | Cost for Entire Vessel Population | 102,705,192 | 95,986,161 |
| **Year 2** 2004 | Retraining per Vessel | 105 | |
| | Total Costs per Vessel | 18,985,995 | 16,583,103 |
| **Year 3** 2005 | Retraining | 105 | |
| | Total Costs per Vessel | 18,985,995 | 15,498,227 |
| **Year 4** 2006 | Retraining | 105 | |
| | Total Costs per Vessel | 18,985,995 | 14,484,325 |
| **Year 5** 2007 | Retraining | 105 | |
| | Total Costs per Vessel | 18,985,995 | 13,536,752 |
| **Year 6** 2008 | Retraining | 105 | |
| | Total Costs per Vessel | 18,985,995 | 12,651,170 |
| **Year 7** 2009 | Retraining | 105 | |
| | Total Costs per Vessel | 18,985,995 | 11,823,523 |
| **Year 8** 2010 | Retraining | 105 | |
| | Total Costs per Vessel | 18,985,995 | 11,050,022 |
| **Year 9** 2011 | Retraining | 105 | |
| | Total Costs per Vessel | 18,985,995 | 10,327,123 |
| **Year 10** 2012 | Retraining | 105 | |
| | Total Costs per Vessel | 18,985,995 | 9,651,517 |
| | **Total Cumulative Present Value** | | **$211,591,923** |

# APPENDIX C: COST CALCULATIONS FOR ALCOHOL TESTING DEVICES (Continued)

**Table C-7: Median Cost Estimate of Evidential Breath-testing Devices for 100 Percent of Vessels**

| Year | Testing Devices & Training | Cost | Present Value (2002 $) |
|---|---|---|---|
| **Year 1** | Testing Device | 2,349 | |
| 2003 | Dry Bas/Regulator | 225 | |
| | Printer Ribbon | 14 | |
| | Evidence Tape | 33 | |
| | Training | 175 | |
| | Initial Cost per Vessel | 2,796 | |
| | Cost for Entire Vessel Population | 505,569,924 | 472,495,256 |
| **Year 2** | No Equipment Supplies Costs | - | |
| 2004 | Training Costs per Vessel | 105 | |
| | Cost for Entire Population | 18,985,995 | 16,583,103 |
| **Year 3** | Additional Mouthpieces | 21 | |
| 2005 | Replacement of Printer Battery | 53 | |
| | Replacement of Printer cartridge | 14 | |
| | Training Costs per Vessel | 105 | |
| | Total Cost per Vessel | 193 | |
| | Cost for Entire Population | 34,898,067 | 28,487,218 |
| **Year 4** | No Equipment Supplies Costs | - | |
| 2006 | Training Costs per Vessel | 105 | |
| | Cost for Entire Population | 18,985,995 | 14,484,325 |
| **Year 5** | No Equipment Supplies Costs | - | |
| 2007 | Training Costs per Vessel | 105 | |
| | Cost for Entire Population | 18,985,995 | 13,536,752 |
| **Year 6** | Replacement Cost for Dry Gas/Regulator | 225 | |
| 2008 | Replacement of Printer Battery | 53 | |
| | Replacement of Printer Cartridge | 14 | |
| | Replacement of Evidence Tape | 33 | |
| | Training Costs per Vessel | 105 | |
| | Total Cost per Vessel | 430 | |
| | Cost for Entire Population | 77,752,170 | 51,809,554 |
| **Year 7** | No Equipment Supplies Costs | - | |
| 2009 | Training Costs per Vessel | 105 | |
| | Cost for Entire Population | 18,985,995 | 11,823,523 |
| **Year 8** | Additional Mouthpieces | 21 | |
| 2010 | Replacement of Printer Battery | 53 | |
| | Replacement of Printer Cartridge | 14 | |
| | Training Costs per Vessel | 105 | |
| | Total Cost per Vessel | 193 | |
| | Cost for Entire Population | 34,898,067 | 20,310,993 |
| **Year 9** | No Equipment Supplies Costs | - | |
| 2011 | Training Costs per Vessel | 105 | |
| | Cost for Entire Population | 18,985,995 | 10,327,123 |
| **Year 10** | No Equipment Supplies Costs | - | |
| 2012 | Training Costs per Vessel | 105 | |
| | Cost for Entire Population | 18,985,995 | 9,651,517 |
| | **Total Cumulative Present Value** | | **$649,509,364** |

# APPENDIX C: COST CALCULATIONS FOR ALCOHOL TESTING DEVICES (Continued)

## Table C-8: Highest Cost Estimate of Saliva ASDs for 100 Percent of Vessels and Replacement Every Other Year

| Year | Detail of Costs | Costs | Present Value (2002 $) |
|---|---|---|---|
| **Year 1** | Testing Device | 150 | |
| 2003 | Training | 88 | |
| | Annual Cost per Vessel | 238 | |
| | Cost for All Vessels | 43,034,922 | 40,219,553 |
| **Year 2** | Training Cost per Vessel | 53 | |
| 2004 | Cost for All Vessels | 9,583,407 | 8,370,519 |
| **Year 3** | Replacement Cost + Training per Vessel | 203 | |
| 2005 | Cost for All Vessels | 36,706,257 | 29,963,240 |
| **Year 4** | Training Cost per Vessel | 53 | |
| 2006 | Cost for All Vessels | 9,583,407 | 7,311,135 |
| **Year 5** | Replacement Cost + Training per Vessel | 203 | |
| 2007 | Cost for All Vessels | 36,706,257 | 26,171,054 |
| **Year 6** | Training Cost per Vessel | 53 | |
| 2008 | Cost for All Vessels | 9,583,407 | 6,385,829 |
| **Year 7** | Replacement Cost + Training per Vessel | 203 | |
| 2009 | Cost for All Vessels | 36,706,257 | 22,858,812 |
| **Year 8** | Training Cost per Vessel | 53 | |
| 2010 | Cost for All Vessels | 9,583,407 | 5,577,630 |
| **Year 9** | Replacement Cost + Training per Vessel | 203 | |
| 2011 | Cost for All Vessels | 36,706,257 | 19,965,772 |
| **Year 10** | Training Cost per Vessel | 53 | |
| 2012 | Cost for All Vessels | 9,583,407 | 4,871,718 |
| | **Total Cumulative Present Value** | | **$171,695,262** |

## Table C-9: Highest Cost Estimate of Breath ASDs for 100 Percent of Vessels

| Year | Detail of Costs | Costs | Present Value (2002 $) |
|---|---|---|---|
| **Year 1** | Testing Device | 487 | |
| 2003 | Training | 175 | |
| | Initial Cost per Vessel | 662 | |
| | Cost for Entire Vessel Population | 119,702,178 | 111,871,194 |
| **Year 2** | Retraining per Vessel | 105 | |
| 2004 | Total Costs per Vessel | 18,985,995 | 16,583,103 |
| **Year 3** | Retraining | 105 | |
| 2005 | Total Costs per Vessel | 18,985,995 | 15,498,227 |
| **Year 4** | Retraining | 105 | |
| 2006 | Total Costs per Vessel | 18,985,995 | 14,484,325 |
| **Year 5** | Retraining | 105 | |
| 2007 | Total Costs per Vessel | 18,985,995 | 13,536,752 |
| **Year 6** | Retraining | 105 | |
| 2008 | Total Costs per Vessel | 18,985,995 | 12,651,170 |
| **Year 7** | Retraining | 105 | |
| 2009 | Total Costs per Vessel | 18,985,995 | 11,823,523 |
| **Year 8** | Retraining | 105 | |
| 2010 | Total Costs per Vessel | 18,985,995 | 11,050,022 |
| **Year 9** | Retraining | 105 | |
| 2011 | Total Costs per Vessel | 18,985,995 | 10,327,123 |
| **Year 10** | Retraining | 105 | |
| 2012 | Total Costs per Vessel | 18,985,995 | 9,651,517 |
| | **Total Cumulative Present Value** | | **$227,476,956** |

# APPENDIX C: COST CALCULATIONS FOR ALCOHOL TESTING DEVICES (Continued)

**Table C-10: Highest Cost Estimate of Evidential Breath-testing Devices for 100 Percent of Vessels**

| Year | Testing Devices & Training | Cost | Present Value (2002$) |
|---|---|---|---|
| **Year 1** | Testing Device | 8,453 | |
| 2003 | Training | 175 | |
| | Initial Cost per Vessel | 8,628 | |
| | Cost for Entire Vessel Population | 1,560,106,332 | 1,458,043,301 |
| **Year 2** | No Equipment Supplies Costs | - | |
| 2004 | Training Costs per Vessel | 105 | |
| | Cost for Entire Population | 18,985,995 | 16,583,103 |
| **Year 3** | Additional Mouthpieces | 27 | |
| 2005 | Simulator Solution | 143 | |
| | Replacement of Printer Cartridge | 14 | |
| | Training Costs per Vessel | 105 | |
| | Total Cost per Vessel | 289 | |
| | Cost for Entire Population | 52,256,691 | 42,657,026 |
| **Year 4** | No Equipment Supplies Costs | - | |
| 2006 | Training Costs per Vessel | 105 | |
| | Cost for Entire Population | 18,985,995 | 14,484,325 |
| **Year 5** | No Equipment Supplies Costs | - | |
| 2007 | Training Costs per Vessel | 105 | |
| | Cost for Entire Population | 18,985,995 | 13,536,752 |
| **Year 6** | Simulator Solution | 143 | |
| 2008 | Replacement of Printer Cartridge | 14 | |
| | Replacement of Evidence Tape | 9 | |
| | Training Costs per Vessel | 105 | |
| | Total Cost per Vessel | 271 | |
| | Cost for Entire Population | 49,001,949 | 32,652,068 |
| **Year 7** | No Equipment Supplies Costs | - | |
| 2009 | Training Costs per Vessel | 105 | |
| | Cost for Entire Population | 18,985,995 | 11,823,523 |
| **Year 8** | Additional Mouthpieces | 27 | |
| 2010 | Simulator Solution | 143 | |
| | Replacement of Printer Cartridge | 14 | |
| | Training Costs per Vessel | 105 | |
| | Total Cost per Vessel | 289 | |
| | Cost for Entire Population | 52,256,691 | 30,413,870 |
| **Year 9** | No Equipment Supplies Costs | - | |
| 2011 | Training Costs per Vessel | 105 | |
| | Cost for Entire Population | 18,985,995 | 10,327,123 |
| **Year 10** | No Equipment Supplies Costs | - | |
| 2012 | Training Costs per Vessel | 105 | |
| | Cost for Entire Population | 18,985,995 | 9,651,517 |
| | **Total Cumulative Present Value** | | **$1,640,172,608** |

# APPENDIX D: SMALL ENTITIES CONSIDERED AND IMPACT

**Table D-1: Average Revenue Calculations for Companies in Small Entity Revenue and Employee Size Ranges**

| NAICS Code | Sector | Employee size range | Number of firms | Number of establishments | Revenue ($1,000) | Average Revenue ($) |
|---|---|---|---|---|---|---|
| 4831 | Deep Sea, Coastal, & Great Lakes water transportation | | | | | |
| | Firms operating for the entire year | | 730 | 1162 | $19,796,526 | |
| | | <5 | 233 | 233 | $214,726 | $921,571 |
| | | 5 to 9 | 140 | 144 | $393,442 | $2,810,300 |
| | | 10 to 19 | 114 | 127 | $765,413 | $6,714,149 |
| | | 20 to 49 | 112 | 123 | $975,214 | $8,707,268 |
| | | 50 to 99 | 44 | 67 | $1,499,025 | $34,068,750 |
| | | 100 to 249 | 41 | 136 | $2,035,250 | $49,640,244 |
| | | 250 to 499 | 24 | 111 | $2,520,011 | $105,000,458 |
| | Firms not operated for the entire year | | 65 | 146 | $542,367 | $8,408,791 |
| | **Total number of Small Entities** | | **773** | | | |
| | | | | | | |
| 4832 | Inland water transportation | | | | | |
| | Firms operating for the entire year | | 431 | 483 | $3,626,901 | |
| | | <5 | 144 | 144 | $66,221 | $459,868 |
| | | 5 to 9 | 84 | 84 | $85,974 | $1,023,500 |
| | | 10 to 19 | 80 | 83 | $144,256 | $1,803,200 |
| | | 20 to 49 | 60 | 65 | $286,052 | $4,767,533 |
| | | 50 to 99 | 27 | 36 | $219,951 | $8,146,333 |
| | | 100 to 249 | 22 | 35 | $576,276 | $26,194,364 |
| | | 250 to 499 | 8 | 11 | $571,842 | $71,480,250 |
| | Firms not operated for the entire year | | 65 | 130 | $53,374 | $821,138 |
| | **Total number of Small Entities** | | **490** | | | |

# APPENDIX D: SMALL ENTITIES CONSIDERED AND IMPACT (Continued)

**Table D-1: Average Revenue Calculations for Companies in Small Entity Revenue and Employee Size Ranges (Continued)**

| NAICS Code | Sector | Revenue range ($) | Number of firms | Number of establishments | Revenue ($1,000) | Average Revenue ($) |
|---|---|---|---|---|---|---|
| 4872 | Scenic & Sightseeing transportation, water | | | | | |
| | Firms operating for the entire year | | 913 | 946 | $882,838 | |
| | | <100,000 | 218 | 218 | D* | D |
| | | 100,000 to 249,999 | 263 | 263 | $42,244 | $160,624 |
| | | 250,000 to 499,999 | 170 | 171 | $59,428 | $349,576 |
| | | 500,000 to 999,999 | 123 | 126 | $84,360 | $685,854 |
| | | 1,000,000 to 2,499,999 | 80 | 83 | $120,511 | $1,506,388 |
| | | 2,500,000 to 499,999,999 | 31 | 38 | $106,459 | $3,434,161 |
| | Firms not operated for the entire year | | 373 | 746 | $245,787 | $659,831 |
| | **Total number of Small Entities** | | **1258** | | | |
| 48831 | Port & Harbor Operations | | | | | |
| | Firms operating for the entire year | | 123 | 152 | $866,933 | |
| | | <100,000 | 8 | 8 | $371 | $46,375 |
| | | 100,000 to 249,999 | 19 | 19 | $3,217 | $169,316 |
| | | 250,000 to 499,999 | 12 | 12 | $4,245 | $353,750 |
| | | 500,000 to 999,999 | 16 | 17 | $11,196 | $699,750 |
| | | 1,000,000 to 2,499,999 | 21 | 27 | $33,916 | $1,615,048 |
| | | 2,500,000 to 499,999,999 | 12 | 13 | $42,202 | $3,516,833 |
| | Firms not operated for the entire year | | 8 | 16 | $22,192 | $2,774,000 |
| | **Total number of Small Entities** | | **96** | | | |

# APPENDIX D: SMALL ENTITIES CONSIDERED AND IMPACT (Continued)

**Table D-1: Average Revenue Calculations for Companies in Small Entity Revenue and Employee Size Ranges (Continued)**

| NAICS Code | Sector | Revenue range ($) | Number of firms | Number of establishments | Revenue ($1,000) | Average Revenue ($) |
|---|---|---|---|---|---|---|
| 48832 | Marine Cargo Handling | | | | | |
| | Firms operating for the entire year | | 346 | 571 | $4,425,593 | |
| | | <100,000 | 30 | 30 | $1,663 | $55,433 |
| | | 100,000 to 249,999 | 34 | 34 | D | D |
| | | 250,000 to 499,999 | 47 | 47 | $16,808 | $357,617 |
| | | 500,000 to 999,999 | 33 | 35 | $24,292 | $736,121 |
| | | 1,000,000 to 2,499,999 | 64 | 74 | $106,273 | $1,660,516 |
| | | 2,500,000 to 499,999,999 | 47 | 57 | $167,382 | $3,561,319 |
| | Firms not operated for the entire year | | 26 | 52 | $30,650 | $1,201,961 |
| | **Total number of Small Entities** | | **281** | | | |
| 48833 | Navigational Services to Shipping | | | | | |
| | Firms operating for the entire year | | 646 | 729 | $1,482,358 | |
| | | <100,000 | 60 | 60 | $3,105 | $51,750 |
| | | 100,000 to 249,999 | 196 | 196 | D | D |
| | | 250,000 50 499,999 | 133 | 133 | $46,822 | $352,045 |
| | | 500,000 to 999,999 | 67 | 69 | $45,258 | $675,493 |
| | | 1,000,000 to 2,499,999 | 79 | 81 | $123,803 | $1,567,127 |
| | | 2,500,000 to 499,999,999 | 43 | 55 | $154,095 | $3,583,605 |
| | Firms not operated for the entire year | | 68 | 136 | $30,844 | $453,588 |
| | **Total number of Small Entities** | | **646** | | | |
| | **Total number of firms**** | | **3543** | | | |

* The term "D" in the cells indicates that the information was not provided by NAICS.

** Only companies within the valid definition of Small Entities were used to calculate the total number. Of those firms not operating the entire year, this analysis assumes half would be Small Entities. Their cost burdens were not considered.

# APPENDIX D: SMALL ENTITIES CONSIDERED AND IMPACT (Continued)

**Table D-2: Impact of Cost on Small Entities – Cost per Company/Average Revenue in Percentage**

| | | | Initial/Saliva ASD | Annual/Saliva ASD | Initial/Breath ASD | Annual/Breath ASD |
|---|---|---|---|---|---|---|
| Cost to companies owning 10 vessels | | | $1,850 | $1,500 | $5,680 | $1,050 |
| Cost to companies owning 5 vessels | | | $925 | $750 | $2,840 | $525 |
| **NAICS Code & Sector** | **Employee Range** | **Average Revenue ($)** | **Cost burden of saliva ASDs/Initial (%)** | **Annual cost burden of saliva ASDs sticks (%)** | **Cost burden of breath ASDs/Initial (%)** | **Annual cost burden of breath ASDs (%)** |
| 4831 Deep Sea, Coastal, & Great Lakes water transportation | | | | | | |
| Firms operating for the entire year | | | | | | |
| | <5 | $921,571 | 0.10 | 0.08 | 0.31 | 0.06 |
| | 5 to 9 | $2,810,300 | 0.03 | 0.03 | 0.10 | 0.02 |
| | 10 to 19 | $6,714,149 | 0.01 | 0.01 | 0.04 | 0.01 |
| | 20 to 49 | $8,707,268 | 0.02 | 0.02 | 0.07 | 0.01 |
| | 50 to 99 | $34,068,750 | 0.01 | 0.00 | 0.02 | 0.00 |
| | 100 to 249 | $49,640,244 | 0.00 | 0.00 | 0.01 | 0.00 |
| | 250 to 499 | $105,000,458 | 0.00 | 0.00 | 0.01 | 0.00 |
| Firms not operated for the entire year | | $8,408,791 | 0.02 | 0.02 | 0.07 | 0.01 |
| 4832 Inland water transportation | | | | | | |
| Firms operating for the entire year | | | | | | |
| | <5 | $459,868 | 0.20 | 0.16 | 0.62 | 0.11 |
| | 5 to 9 | $1,023,500 | 0.09 | 0.07 | 0.28 | 0.05 |
| | 10 to 19 | $1,803,200 | 0.05 | 0.04 | 0.16 | 0.03 |
| | 20 to 49 | $4,767,533 | 0.04 | 0.03 | 0.12 | 0.02 |
| | 50 to 99 | $8,146,333 | 0.02 | 0.02 | 0.07 | 0.01 |
| | 100 to 249 | $26,194,364 | 0.01 | 0.01 | 0.02 | 0.00 |
| | 250 to 499 | $71,480,250 | 0.00 | 0.00 | 0.01 | 0.00 |
| Firms not operated for the entire year | | $821,138 | 0.23 | 0.18 | 0.69 | 0.13 |

# APPENDIX D: SMALL ENTITIES CONSIDERED AND IMPACT (Continued)

**Table D-2: Impact of Cost on Small Entities – Cost per Company/Average Revenue in Percentage (Continued)**

| | | | Initial/Saliva ASD | Annual/Saliva ASD | Initial/Breath ASD | Annual/Breath ASD |
|---|---|---|---|---|---|---|
| Cost to companies owning 10 vessels | | | $1,850 | $1,500 | $5,680 | $1,050 |
| Cost to companies owning 5 vessels | | | $925 | $750 | $2,840 | $525 |
| **NAICS Code & Sector** | **Revenue range ($)** | **Average Revenue ($)** | **Cost burden of saliva ASDs/Initial (%)** | **Annual cost burden of saliva ASDs (%)** | **Cost burden of breath ASDs/Initial (%)** | **Annual cost burden of breath ASDs (%)** |
| 4872 Scenic & Sightseeing transportation, water | | | | | | |
| Firms operating for the entire year | | | | | | |
| | <100,000 | | | | | |
| | 100,000 to 249,999 | $160,624 | 0.58 | 0.47 | 1.77 | 0.33 |
| | 250,000 to 499,999 | $349,576 | 0.26 | 0.21 | 0.81 | 0.15 |
| | 500,000 to 999,999 | $685,854 | 0.27 | 0.22 | 0.83 | 0.15 |
| | 1,000,000 to 2,499,999 | $1,506,388 | 0.12 | 0.10 | 0.38 | 0.07 |
| | 2,500,000 to 499,999,999 | $3,434,161 | 0.05 | 0.04 | 0.17 | 0.03 |
| Firms not operated for the entire year | | $659,831 | 0.28 | 0.23 | 0.86 | 0.16 |
| 48831 Port & Harbor Operations | | | | | | |
| Firms operating for the entire year | | | | | | |
| | <100,000 | $46,375 | 1.99 | 1.62 | 6.12 | 1.13 |
| | 100,000 to 249,999 | $169,316 | 0.55 | 0.44 | 1.68 | 0.31 |
| | 250,000 to 499,999 | $353,750 | 0.26 | 0.21 | 0.80 | 0.15 |
| | 500,000 to 999,999 | $699,750 | 0.26 | 0.21 | 0.81 | 0.15 |
| | 1,000,000 to 2,499,999 | $1,615,048 | 0.11 | 0.09 | 0.35 | 0.07 |
| | 2,500,000 to 499,999,999 | $3,516,833 | 0.05 | 0.04 | 0.16 | 0.03 |
| Firms not operated for the entire year | | $2,774,000 | 0.07 | 0.05 | 0.20 | 0.04 |

# APPENDIX D: SMALL ENTITIES CONSIDERED AND IMPACT (Continued)

**Table D-2: Impact of Cost on Small Entities – Cost per Company/Average Revenue in Percentage (Continued)**

| | | | Initial/Saliva ASD | Annual/Saliva ASD | Initial/Breath ASD | Annual/Breath ASD |
|---|---|---|---|---|---|---|
| Cost to companies owning 10 vessels | | | $1,850 | $1,500 | $5,680 | $1,050 |
| Cost to companies owning 5 vessels | | | $925 | $750 | $2,840 | $525 |
| **NAICS Code & Sector** | **Revenue range ($)** | **Average Revenue ($)** | **Cost burden of saliva sticks/Initial (%)** | **Annual cost burden of saliva sticks (%)** | **Cost burden of ASDs/Initial (%)** | **Annual cost burden of ASDs (%)** |
| 48832 Marine Cargo Handling | | | | | | |
| Firms operating for the entire year | | | | | | |
| | <100,000 | $55,433 | 1.67 | 1.35 | 5.12 | 0.95 |
| | 100,000 to 249,999 | D | D | D | D | D |
| | 250,000 to 499,999 | $357,617 | 0.26 | 0.21 | 0.79 | 0.15 |
| | 500,000 to 999,999 | $736,121 | 0.25 | 0.20 | 0.77 | 0.14 |
| | 1,000,000 to 2,499,999 | $1,660,516 | 0.11 | 0.09 | 0.34 | 0.06 |
| | 2,500,000 to 499,999,999 | $3,561,319 | 0.05 | 0.04 | 0.16 | 0.03 |
| Firms not operated for the entire year | | $1,201,961 | 0.15 | 0.12 | 0.47 | 0.09 |
| 48833 Navigational Services to Shipping | | | | | | |
| Firms operating for the entire year | | | | | | |
| | <100,000 | $51,750 | 1.79 | 1.45 | 5.49 | 1.01 |
| | 100,000 to 249,999 | D | D | D | D | D |
| | 250,000 to 499,999 | $352,045 | 0.26 | 0.21 | 0.81 | 0.15 |
| | 500,000 to 999,999 | $675,493 | 0.27 | 0.22 | 0.84 | 0.16 |
| | 1,000,000 to 2,499,999 | $1,567,127 | 0.12 | 0.10 | 0.36 | 0.07 |
| | 2,500,000 to 499,999,999 | $3,583,605 | 0.05 | 0.04 | 0.16 | 0.03 |
| Firms not operated for the entire year | | $453,588 | 0.41 | 0.33 | 1.25 | 0.23 |

**Exhibit E**

***Most Wanted Transportation Safety Improvements Federal Issues***

# Marine

## Improve Drug and Alcohol Testing of Crews After Accidents

### Objective

• Strengthen and clarify regulations to require that drug and alcohol testing be conducted quickly after serious marine accidents.

### Importance

In accidents involving human error, the Safety Board must first determine whether toxicological issues can be excluded as causal to the accident. If drugs and alcohol cannot be excluded, the Board may jeopardize its assessment of other critical issues, such as fatigue. Therefore, post accident toxicological testing is extremely important to accident investigations. The potential effects of alcohol or drug use as a causal factor in major marine accidents frequently cannot be ruled out because testing is not done at all, or is often not done correctly and in a timely manner. This is usually attributable to lack of knowledge of the testing requirements for alcohol, because Coast Guard regulations for postaccident alcohol and drug testing are unclear. In the Board's special investigation and investigation reports, *Postaccident Testing for Alcohol and Other Drugs in the Marine Industry* and *the Ramming of the Portland-South Portland (Million Dollar) Bridge at Portland, Maine, by the Liberian Tankship Julie N on September 27, 1996*, the Board cited 27 additional cases since the *Exxon* Valdez oil spill in 1989 in which mandatory post-accident alcohol and drug testing were not properly completed after serious marine accidents. The Board's recommendations, issued to the U.S. Coast Guard in May 1998, call for a series of improvements related to alcohol and drug testing. (See safety recommendations section in this issue area.)

### Summary of Action

Congress, citing the Safety Board's special investigation report in its 1998 Coast Guard Authorization Act (PL 105-383), revised 46 *United States Code*, by adding a new section 2303–*Post Serious Marine Casualty Alcohol Testing.* On February 28, 2003, the Coast Guard published an NPRM (USCG-2001-8773) proposing to amend 46 CFR Part 4, to change the drug and alcohol testing requirements for commercial vessels following a serious marine accident in accordance with the changes in PL105-383.[2] In October 2003, the Coast Guard reopened the public comment period for the NPRM until November 20, 2003, because the public meeting to discuss the proposed changes scheduled for September 19, 2003, was cancelled because of Hurricane Isabel. According to the Coast Guard, some 121 comments were received during the comment periods. Although 6 years have elapsed since the Board's recommendations were issued and the Public Law enacted, it appears that the proposed changes in the NPRM will address most of the safety

recommendations in this issue area if it becomes a final rule. Expected publication date is now April 2005.

### Action(s) Remaining

Issuance of a final rule by the Coast Guard on alcohol and drug testing requirements for commercial vessels following a serious marine accident.

### Safety Recommendations

**M-98-71 (USCG)**
**Issued May 5, 1998**
**Added to the Most Wanted List: 2002**
**Status: Open—Acceptable Response**
Incorporate language into the postaccident testing regulations that clearly states alcohol testing is more time-sensitive and therefore should be conducted ahead of drug testing. (Source: *Postaccident Testing for Alcohol and Other Drugs in the Marine Industry and the Ramming of the Portland-South Portland (Million Dollar) Bridge at Portland, Maine, by the Liberian Tankship Julie N on September 27, 1996 [NTSB/SIR-98-02]*)

**M-98-72 (USCG)**
**Issued May 5, 1998**
**Added to the Most Wanted List: 2002**
**Status: Open—Acceptable Alternate Response**
Institute a task force that will evaluate deficiencies in past postaccident alcohol and drug testing performance and use "lessons learned" to implement a program that ensures testing is performed in a manner that will produce meaningful results. (Source: *Postaccident Testing for Alcohol and Other Drugs in the Marine Industry and the Ramming of the Portland-South Portland (Million Dollar) Bridge at Portland, Maine, by the Liberian Tankship Julie N on September 27, 1996 [NTSB/SIR-98-02]*)

**M-98-73 (USCG)**
**Issued May 5, 1998**
**Added to the Most Wanted List: 2002**
**Status: Open—Acceptable Response**
Implement a procedure for Coast Guard personnel to conduct breath testing of mariners who are involved in a serious marine incident, as defined by 46 CFR 4.03-2, when testing by the marine employer will not or cannot take place within 2 hours of the accident. (Source: *Postaccident Testing for Alcohol and Other Drugs in the Marine Industry and the Ramming of the Portland-South Portland (Million Dollar) Bridge at Portland, Maine, by the Liberian Tankship Julie N on September 27, 1996 [NTSB/SIR-98-02]*)

**M-98-75 (USCG)**
**Issued May 5, 1998**
**Added to the Most Wanted List: 2002**
**Status: Open—Acceptable Response**
Establish a requirement in the postaccident testing regulations that foreign commercial vessels on the navigable waters of the United States, as well as U.S. oceangoing vessels, must have on board breath-testing devices capable of determining the presence of alcohol in a person's system and urine specimen collection and shipping kits. (Source: *Postaccident Testing for Alcohol and Other Drugs in the Marine Industry and the Ramming of the Portland-South Portland (Million Dollar) Bridge at Portland, Maine, by the Liberian Tankship Julie N on September 27, 1996 [NTSB/SIR-98-02]*)

**M-98-76 (USCG)**
**Issued May 5, 1998**

**Added to the Most Wanted List: 2002**
**Status: Open—Unacceptable Response**
Establish a requirement in the postaccident testing regulations that foreign vessels on the navigable waters of the United States and oceangoing U.S. vessels have a postaccident testing plan that identifies crewmembers who will conduct the testing; sets forth the qualifications for crewmembers assigned to conduct the testing; establishes procedures for the care of specimens, including chain of custody; lists the records to be prepared; and provides identification and addresses for testing laboratories that can process urine specimens or testing firms that may assist or conduct postaccident testing for vessels in U.S. ports. (Source: *Postaccident Testing for Alcohol and Other Drugs in the Marine Industry and the Ramming of the Portland-South Portland (Million Dollar) Bridge at Portland, Maine, by the Liberian Tankship Julie N on September 27, 1996 [NTSB/SIR-98-02])*

**M-98-77 (USCG)**
**Issued May 5, 1998**
**Added to the Most Wanted List: 2002**
**Status: Open—Acceptable Response**
Incorporate language into the postaccident testing regulations that clearly states that breath or blood specimens are for determining the presence of alcohol and that urine specimens are used to determine the presence of dangerous drugs. (Source: *Postaccident Testing for Alcohol and Other Drugs in the Marine Industry and the Ramming of the Portland-South Portland (Million Dollar) Bridge at Portland, Maine, by the Liberian Tankship Julie N on September 27, 1996 [NTSB/SIR-98-02])*

**M-98-79 (USCG)**
**Issued May 5, 1998**
**Added to the Most Wanted List: 2002**
**Status: Open—Acceptable Response**
Establish a requirement that postaccident testing for drugs begin within 4 hours of a serious marine incident and postaccident testing for alcohol begin within 2 hours of a serious marine incident, with attempts to test for alcohol ceasing after 8 hours, and establish a requirement that the marine employer document any testing delays or failures. (Source: *Postaccident Testing for Alcohol and Other Drugs in the Marine Industry and the Ramming of the Portland-South Portland (Million Dollar) Bridge at Portland, Maine, by the Liberian Tankship Julie N on September 27, 1996 [NTSB/SIR-98-02])*

**M-98-81 (USCG)**
**Issued May 5, 1998**
**Added to the Most Wanted List: 2002**
**Status: Open—Acceptable Response**
Establish a provision in the postaccident testing regulations that prohibits mariners involved in an accident from consuming alcohol for 8 hours afterwards, or until breath or blood and urine specimens are collected, or until released by the Coast Guard. (Source: *Postaccident Testing for Alcohol and Other Drugs in the Marine Industry and the Ramming of the Portland-South Portland (Million Dollar) Bridge at Portland, Maine, by the Liberian Tankship Julie N on September 27, 1996 [NTSB/SIR-98-02])*

[2] The Safety Board provided written comments to the NRPM on June 30, 2003, consistent with its recommendations.

Most Wanted Marine
Most Wanted Home
NTSB Home

**Exhibit F**

UNITED STATES DISTRICT COURT
DISTRICT OF MASSACHUSETTS

| | | |
|---|---|---|
| UNITED STATES OF AMERICA | ) | Criminal No. |
| | ) | |
| v. | ) | Violations: |
| | ) | 33 U.S.C. §§1319(c)(1), 1321(b)(3) |
| | ) | (Clean Water Act) |
| BOUCHARD TRANSPORTATION | ) | 16 U.S.C. §§703, 707 |
| COMPANY, INC. | ) | (Migratory Bird Treaty Act) |
| Defendant. | ) | |

**INFORMATION**

THE UNITED STATES ATTORNEY CHARGES THAT:

**The Clean Water Act and the Oil Pollution Act**

1. In the Federal Water Pollution Control Act (the "Clean Water Act"), as amended by the Oil Pollution Act, 33 U.S.C. §1321(b)(1), Congress has declared that it is the policy of the United States that there should be no discharges of oil or hazardous substances into or upon the navigable waters of the United States or the adjoining shorelines.

2. The Clean Water Act makes it a crime for a person to negligently discharge oil into or upon the navigable waters or contiguous zone of the United States, in such quantities as may be harmful. 33 U.S.C. §§1321(b)(3) and 1319(c)(1).

3. The Clean Water Act defines a "person" as an individual or a corporation. 33 U.S.C. §1321(a)(7).

4. The Clean Water Act defines a "discharge" as any spilling, leaking, pumping, pouring, emitting, emptying or dumping. 33 U.S.C. §1321(a)(2). The Clean Water Act defines "oil" as oil of any kind or in any form, including, but not limited to, petroleum, fuel oil, sludge and oil refuse. 33 U.S.C. §1321(a)(1).

5. Federal regulations promulgated under the Clean Water Act define a "harmful" quantity of oil as including any discharges of oil that cause a film or sheen upon or discoloration of the surface of the water or adjoining shorelines or cause a sludge or emulsion to be deposited beneath the surface of the water or adjoining shorelines. 40 C.F.R. §110.3.

6. The Clean Water Act defines the "navigable waters" of the United States as the waters of the United States and the territorial seas, which are defined to be water extending three (3) miles seaward of the low tide mark. 33 U.S.C. §§ 1362(7) and 1362(8).

**Background**

7. At all times relevant to this Information, Bouchard Transportation Company, Inc. ("BTC") was a privately held, New York corporation with its principal place of business in Hicksville, New York.

8. At all times relevant to this Information, BTC was in the business of the marine transportation of oil and other types of petroleum products, primarily by means of tugboats and barges. BTC's operations were centered along the eastern seaboard of the United States and the Gulf of Mexico.

9. On or about April 27, 2003, a tugboat owned and operated by BTC, named the Evening Tide, was traveling en route from Philadelphia, Pennsylvania to Sandwich, Massachusetts. The Evening Tide departed from Philadelphia on April 24, 2003.

10. During this trip, the Evening Tide was hauling a barge named the Bouchard B-120 (the "B-120") to the Mirant Canal Generating Plant located on the southern side of the Cape Cod Canal in Sandwich. The B-120, built in 1975, is a single-hull vessel that weighs 7,912 gross tons and is 376 feet long. The B-120 is comprised of ten separate tanks, five on the port side and five

on the starboard side of the vessel.

11. The B-120 is an unpowered barge and it can only be moved with the assistance of a tugboat. The primary means by which a tugboat, such as the Evening Tide, moves the B-120 is either by towing it, using one of the two steel cables that extend off the stern of the tugboat, or by pushing the barge. The B-120 has a large, triangular shaped notch in her stern, which a tugboat like the Evening Tide can slip into in order to push the barge.

12. On April 27, 2003, the B-120 was loaded with approximately 99,000 barrels of #6 oil, also known as Bunker C fuel. #6 oil is a thick, viscous and adhesive petroleum product that is primarily used by utilities and power plants. Measured in gallons, the B-120 was carrying more than four million gallons of # 6 oil as it traveled through Buzzards Bay on April 27, 2003. With the load it was carrying on this date, the draft of the B-120 (*i.e.* the depth to which the barge extended into the water) was approximately 25 feet, six inches.

13. For this trip from Philadelphia to Sandwich, the Evening Tide had a crew of six individuals, comprised of a captain (the "Evening Tide Captain"), a mate, two deck hands, a chief engineer and an assistant engineer. The crew worked in six hour shifts, with each shift consisting of either the captain or the mate, one deck hand and one of the engineers. The unpowered B-120 was manned by a two-person crew, a captain and a mate, who worked in six hour shifts. As a general matter, the crew of the Evening Tide worked on the boat for three weeks at a time, followed by three weeks off.

14. The mate on the Evening Tide (the "Evening Tide Mate") was hired by Bouchard as a mate in August 2002. The duties of the mate are to be in charge of all aspects of the tugboat operations during the twelve hours each day when the mate is on-duty and the captain is off-duty.

According to Bouchard's Responsible Carrier Plan, when on duty the mate is responsible for, among other things, "navigat[ing] the vessel in a safe and prudent manner . . . complying with all applicable U.S. Coast Guard Inland Navigation Rules." The mate must also "observ[e] [BTC's] look-out policy," by maintaining a "proper look-out by sight and hearing as well as by all available means appropriate in the prevailing circumstances and conditions so as to make a full appraisal of the situation and the risk of collision." The mate is also responsible for maintaining radio communications with other vessels during his watch.

15. The Evening Tide Mate was initially assigned to the informal mate training program at Bouchard for a few weeks, in which he served alongside an experienced captain as an extra person during the captain's shift. The Evening Tide Mate was then promoted out of the training program to be a full mate aboard two other BTC tugboats -- the Ellen Bouchard and then the J. George Betz -- prior to being assigned to the Evening Tide. The BTC captains who worked with the Evening Tide Mate advised BTC's headquarters that they had doubts about the Evening Tide Mate's ability to handle the responsibilities of a mate in charge of a tugboat hauling an oil barge.

16. Despite these negative reports about the Evening Tide Mate's competency, the Evening Tide Mate was only briefly re-assigned to the BTC mate training program in early 2003. The Evening Tide Mate was then assigned to serve as the mate aboard the Evening Tide beginning in February 2003.

17. The Evening Tide Mate's problems continued on the Evening Tide. The Evening Tide Mate caused a barge to collide with the dock in Philadelphia in March 2003. Although there was no oil spill as a result of this incident, there was property damage to the dock. This

incident was reported to BTC's headquarters and the Evening Tide Mate admitted causing the accident because he misjudged the wind and current. The captain of the barge reported that the accident resulted from the Evening Tide Mate "closing on [the] dock at a fast rate" and making "corrections" that caused the barge to collide with the dock.

18. The Evening Tide Captain also called BTC headquarters to complain about the Evening Tide Mate, but the Evening Tide Mate remained assigned to the Evening Tide and commenced a new three-week stint as the mate on April 24, 2003.

19. The Evening Tide Mate experienced more difficulties shortly after midnight on April 27, 2003, a little more than twelve hours before the oil spill occurred. At this time, the Evening Tide Mate improperly released the starboard side tow wire off the stern of the Evening Tide, causing it to tangle and rendering it inoperable. The cost of repairing the damage caused to the starboard side tow wire as a result of this incident was several thousand dollars. The Evening Tide was still able to tow the B-120 barge by switching to the port side tow wire.

**The Oil Spill**

20. The weather on the afternoon of April 27, 2003 was beautiful; it was a bright and clear day, with winds at 10-15 knots out of the North. The sea swells that day were running three to five feet in a southwesterly direction. All the navigational, communications, mechanical and steering equipment systems aboard the Evening Tide were in good working order throughout that day.

21. On April 27, 2003, the Evening Tide Mate was in charge of the vessel during the noon to 6:00 p.m. shift. The Evening Tide Captain was off-duty for that shift. The Evening Tide approached the entrance to Buzzards Bay Channel, as delineated by the first of a series of

red and green navigational buoys which clearly mark the channel, at approximately 4:30 p.m. The first navigational buoy a ship encounters as it enters the Buzzards Bay Channel from the south is a green navigational buoy located at 41-25-48 degrees North and 071-02-18 degrees West (hereinafter "the First Buzzards Bay Buoy"). All of these navigational buoys, as well as the hazards in Buzzards Bay and the depths of the various rocky shoals in this area, are clearly marked on the widely used navigational charts published by the National Oceanic and Atmospheric Administration ("NOAA"). These NOAA charts for Buzzards Bay were on-board the Evening Tide on April 27, 2003, both in paper form and on the navigational software installed on the ship's computer.

22. As the Evening Tide was approaching the entrance to Buzzards Bay Channel it was towing the B-120, using the steel cable off the stern of the Evening Tide, which was connected to a cable wire off the bow of the B-120. At this time, the length of the cable wire connecting the Evening Tide to the B-120 was approximately 1,200 feet.

23. A second tug boat, the Carl Ray, which is owned and operated by a different company, was also traveling northwards towards Buzzards Bay Channel on the afternoon of April 27, 2003. Like the Evening Tide, the Carl Ray was towing a barge loaded with oil. The Carl Ray was approximately two nautical miles behind the Evening Tide, to its southeast.

24. Prior to reaching the entrance to Buzzards Bay Channel, at approximately 4:10 p.m., the mate on the Carl Ray attempted to contact the Evening Tide several times. After initially not receiving a response, he spoke with the Evening Tide Mate and stated that the Carl Ray would be slowing down to shorten its tow wire.

25. Shortly thereafter, the captain of the Carl Ray, who joined his mate in the wheelhouse of the Carl Ray, observed the route the Evening Tide was traveling as it approached the First Buzzards Bay Buoy. The captain of the Carl Ray initiated radio contact with the Evening Tide because the Evening Tide was approaching the Buzzards Bay Channel at the extreme left-hand side of the channel instead of heading for the center of the channel, as is customary. The captain of the Carl Ray was very concerned that the Evening Tide was approaching more shallow areas of Buzzards Bay, punctuated by several reefs, which exist just outside the marked channel. Immediately to the west of the First Buzzards Bay Buoy is an area of several rocky reefs that lie 22 feet below the surface. By contrast, the depths within the marked Buzzards Bay Channel range between 42 and 63 feet.

26. The captain of the Carl Ray, despite efforts to reach the Evening Tide over the radio for several minutes, was unable to reach anyone on the Evening Tide because the Evening Tide Mate failed to maintain radio communications. For the second time that afternoon, no one aboard the Evening Tide responded promptly to the repeated attempts by the Carl Ray to communicate via the radio. As a result, the Evening Tide Mate missed the warnings from the Carl Ray that the Evening Tide was off course.

27. The Evening Tide Mate's conduct, in failing to assign a crew member to relieve him in the wheelhouse and monitor the radio, violated the Evening Tide's "Watch Standing Orders" issued by Evening Tide captain Jon Richardson in January 2001. Among other things, these standing orders, which were aboard the Evening Tide on April 27, 2003, stated that the mate or captain shall "never leave the bridge UN-attended (sic) while underway or at anchor unless properly relieved."

28. After several minutes, the Evening Tide Mate initiated a radio call to the Carl Ray in which the Evening Tide Mate stated that he was having difficulty bringing in his tow wire. The captain of the Carl Ray asked the Evening Tide Mate if he was where he wanted to be in the channel, in reference to the highly unorthodox approach the Evening Tide was taking. The Carl Ray received a garbled response.

29. After this brief exchange with the Evening Tide Mate, the mate and the captain of the Carl Ray both watched closely as the Evening Tide approached the First Buzzards Bay Buoy. Each of these individuals saw the Evening Tide and the B-120 pass the First Buzzards Bay Buoy with the buoy off the starboard side of the vessels. In other words, the Evening Tide and the B-120 traveled to the west of the First Buzzards Bay Buoy, outside the well-marked Buzzards Bay Channel. According to these witnesses, the B-120 and the Evening Tide were approximately 1/4 of a mile on the far side of the First Buzzards Bay Buoy.

30. The B-120 struck a rock outcropping to the west of the First Buzzards Bay Buoy as it traveled outside Buzzards Bay Channel. This reef is marked on the NOAA navigational charts as being at a depth of 22 feet.

31. At the time of the accident, the Evening Tide and the B-120 were traveling at a speed of approximately 6 knots. The impact of the barge striking the rocks at this location ripped a twelve-foot long gash slightly to the starboard side of the keel line on the bottom of the B-120. The hole in the bottom of the barge, which was constructed of thick steel, was as wide as one foot at certain points and up to twenty-one inches deep. The damage caused by this collision with the reef was limited to the #2 tank on the starboard side of the B-120.

**The Impact of the Oil Spill**

32. As a result of this collision with the reef, tens of thousands of gallons of #6 oil was released into Buzzards Bay from the gaping hole in the B-120. The estimates of the size of the spill range from 22,000 gallons to 98,000 gallons.

33. The discharge of this heavy, sticky oil was especially harmful to the fragile bird population in this area. More than 450 federally-protected birds were killed when they came into contact with the #6 oil discharged from the B-120. More than half of the birds killed by the BTC oil spill were Common Loons, Red Throated Loons, Common Eiders or Black Scoters. Oil from this spill also caused the death of a wide variety of other protected birds, including Black Backed Gulls, Dunlins, Herring Gulls, Long-tailed Ducks, Black Ducks, Buffleheads, Canada Geese, Common Terns, Gannets, Greater Scaups, Mergansers, Grebes, Swans, Razorbills, Scoters, Willets and Yellowlegs. Only a small number of birds who came into contact with the #6 oil from this spill were rehabilitated and returned to the wild.

34. The oil spill also forced the immediate closure of thousands of acres of shellfish beds in Buzzards Bay, a large portion of which remained closed for several months following the oil spill. Oil from the B-120 affected close to 90 miles of Massachusetts beaches and coastline. The total cost of cleaning up this oil spill is still being determined and it is expected to run into the tens of millions of dollars. The long-term impact from the release of this oil into the water, in terms of marine life, the bird population and the overall ecology of Buzzards Bay will not be known for several years.

**COUNT ONE – 33 U.S.C. §§1319(c)(1), 1321(b)(3)**
**(Clean Water Act – Negligent Discharge of Pollutant)**

THE UNITED STATES ATTORNEY FURTHER CHARGES THAT:

35. Paragraphs 1-34 are realleged and incorporated by reference as though fully set forth herein.

36. On or about April 27, 2003 in Buzzards Bay, in the District of Massachusetts and elsewhere, the defendant,

BOUCHARD TRANSPORTATION COMPANY

negligently caused the discharge of a harmful quantity of oil from its barge, the Bouchard B-120, into and upon the navigable waters of the United States.

All in violation of Title 33 U.S.C. §§1319(c)(1) and 1321(b)(3).

**COUNT TWO- 16 U.S.C. §§703 and 707(a)**
**(Migratory Bird Treaty Act)**

THE UNITED STATES ATTORNEY FURTHER CHARGES THAT:

37. Paragraphs 1-34 are realleged and incorporated by reference as though fully set forth herein.

38. On or about April 27, 2003 in Buzzards Bay, in the District of Massachusetts and elsewhere, the defendant,

BOUCHARD TRANSPORTATION COMPANY

without being permitted to do so by regulation as required by law, did kill a migratory non-game bird, to wit, a common loon (*Gavia immer*);

All in violation of the Migratory Bird Treaty Act, Title 16, U.S.C. §§703 and 707(a) and Title 50, *Code of Federal Regulations*, §21.11.

MICHAEL J. SULLIVAN
United States Attorney

By: _____
Joshua S. Levy
Nadine Pellegrini
Assistant U.S. Attorneys

Peter Kenyon
Senior Criminal Enforcement Counsel
Environmental Protection Agency

Dated: March 29, 2004

**Exhibit G**

UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF MASSACHUSETTS

| | |
|---|---|
| THE UNITED STATES OF AMERICA,<br><br>Plaintiff,<br>v.<br><br>THE COMMONWEALTH OF MASSACHUSETTS, et al.<br><br>Defendants, and<br><br>THE COALITION FOR BUZZARDS BAY,<br><br>Intervenor-Defendant | Civil Action No. 05-10112 JLT |
| THE AMERICAN WATERWAYS OPERATORS, et al.<br><br>Intervenor-Plaintiff<br>v.<br><br>MITT ROMNEY, Governor of Massachusetts, et al.<br><br>Defendants | |

**AFFIDAVIT OF MARK RASMUSSEN**

1. My name is Mark Rasmussen. My business address is The Coalition for Buzzards Bay ("The Coalition"), 620 Belleville Avenue, New Bedford, MA 02745. I have been the Executive Director of The Coalition since 1998. I make this affidavit based upon personal knowledge in support of The Coalition for Buzzards Bay's Opposition to the United States' Motion for Summary Judgment and Its Cross-Motion for Summary Judgment.

2. The Coalition, which was founded in 1987, is a nonprofit membership organization dedicated to the restoration, protection, sustainable use and enjoyment of Buzzards Bay. The Coalition's work is focused in four main areas: water quality and natural resource monitoring, advocacy, land conservation and education.

3. Among The Coalition's more than 4,000 individual, family, business and organizational members and volunteers, the vast majority are active users of Buzzards Bay and its shoreline for a broad variety of recreational and commercial purposes – including swimming, sunbathing, bird-watching, boating, kayaking, windsurfing, fishing, shellfishing, aquaculture, tourism and education.

4. Buzzards Bay was designated by the United States Congress in 1985 as an "Estuary of National Significance," and was further designated by the United States Environmental Protection Agency as a "No Discharge Area" in 2000. The Bay is also a state-designated Ocean Sanctuary, and is home to a variety of threatened and endangered species, including approximately half of the remaining global population of the endangered roseate tern.

5. At 28 miles long, with an average width of only 8 miles and a mean depth of only 36 feet, Buzzards Bay poses many risks to navigation. Both ends of the Bay are marked with dangerous ledges, reefs and currents. Nonetheless, an estimated 2 billion gallons of oil is transported through Buzzards Bay each year. The Bay consequently has a long history of significant oil spills which have inflicted serious ecological damage on the Bay and its diverse natural resources.

6. When Bouchard Transportation Company's Barge-120 grounded in Buzzards Bay on April 27, 2003, The Coalition and its members suffered the acutely

negative impact of the resulting oil spill (the "Bouchard-120 Oil Spill"). The Bouchard-120 released a reported 98,000 gallons of thick, viscous and adhesive No. 6 fuel oil that contaminated some 93 miles of shoreline, closed thousands of acres of shellfish beds, killed hundreds of protected birds, and closed public and private beaches. The ecological effects of this single spill are expected to linger for decades.

7. It was reported after the Bouchard-120 Oil Spill that it was not until eighteen hours after the devastating spill that alcohol testing of the crew members of the Bouchard-120 and its tow, the Evening Tide, was conducted.

8. It is currently not known whether alcohol contributed to the Bouchard-120 Oil Spill.

9. The Bouchard-120 Oil Spill caused serious damage both to property and to the Bay's natural resources.

10. Coalition members owning waterfront property experienced contamination by the Bouchard-120 Oil Spill. In the aftermath of the oil spill, their beaches, seawalls, docks and jetties were covered to varying extents with the thick heavy No. 6 fuel oil, in many cases leaving these areas unusable for lengthy periods of time.

11. Additionally, a number of The Coalition's members derive at least part of their income from the Bay and its natural resources, including through harvesting the Bay's abundant shellfish and lobsters, tourism, various aspects of providing recreational boating services, etc. Thus, the Bouchard-120 Oil Spill – which forced the temporary closure of beaches, restricted fishing activities and left thousands of acres of shellfish beds closed for many months, some which remain closed today – had a significant impact on these members' abilities to derive their usual incomes from the Bay's resources.

12. The Bouchard-120 Oil Spill caused the deaths of approximately 450 birds including protected roseate terns and piping plovers, as well as loons, scoters, mergansers, oyster catchers and eiders.

13. The Bouchard-120 Oil Spill triggered an estimated $36 million cleanup effort in which The Coalition was heavily involved and continues to this day.

14. In 2001, The Coalition was officially designated by the Commonwealth of Massachusetts as the Volunteer Coordinator in the event of any significant oil spill in Buzzards Bay. Therefore, in the wake of the Buzzards Bay Oil Spill, the Coalition coordinated the efforts of nearly 1,000 oil spill response volunteers and represented the municipalities adjacent to the Bay in advocating for cleanup of the oil. As the designated Volunteer Coordinator for the Buzzards Bay Oil Spill, The Coalition coordinated the efforts of hundreds of volunteers who became involved in wildlife rehabilitation and worked with countless others to educate the public about oil spill safety issues.

15. The Coalition also worked with various city, state and federal government officials as well as wildlife rehabilitation experts to set up a wildlife rehabilitation center at the New Bedford Wastewater Treatment Facility. The Coalition coordinated the staffing of the wildlife rehabilitation center and ensured that sufficient volunteers were present to care for the contaminated and recovering wildlife, including approximately 184 birds that were brought to the facility for treatment. The wildlife rehabilitation volunteers were trained by experts and then worked often long hours to meticulously wash oil off contaminated birds, attended to the feeding and care of birds in recovery, and generally kept the temporary rehabilitation center operating.

I declare under penalty of perjury that the foregoing is true and correct.

/s/ Mark Rasmussen
Mark Rasmussen

Date: July 12, 2005

**Exhibit H**

# Buzzards Bay Oil Spill in Massachusetts

***A cooperative natural resource damage assessment***

***On April 27, 2003, the* Bouchard Barge 120 *hit an obstacle in Buzzards Bay, creating a twelve-foot rupture in the hull and spilling an estimated 98,000 gallons of No. 6 oil. To date, the oil has impacted an estimated 90 miles of shoreline, numerous bird species, and recreational uses of the bay.***

While response agencies are working to contain and clean up the oil, the natural resource trustees, NOAA, the U.S. Fish and Wildlife Service, the State of Massachusetts, the State of Rhode Island, and the Wampanoag tribe have initiated a natural resource damage assessment (NRDA). Natural resource trustees are designated federal and state agencies who act on behalf of the public to assess natural resource injuries, identify potential projects to restore the injured natural resources and related service losses, and oversee the implementation of restoration projects. NRDA is the process by which the natural resource trustees accomplish these tasks.

NOAA, the lead administrative trustee for the Buzzards Bay oil spill, will be coordinating trustee efforts. Bouchard Transportation Company, the responsible party that owns the barge and the tug and was operating the vessels at the time of the incident, has been actively cooperating in preliminary NRDA activities with the trustees.

## Injured Natural Resources

To evaluate the oil impacts, the trustees, in cooperation with Bouchard and its representatives, are surveying shorelines, collecting and analyzing oil, water, sediment, and shellfish tissue samples, monitoring data on oiled and dead birds, and examining recreational uses of Buzzards Bay. To date, the trustees have identified potential impacts to—

- Shoreline Habitat
- Birds/Wildlife
- Recreational Uses

The trustees have estimated that 90 miles of shoreline have been oiled to varying degrees. The trustees are in the process of collecting and analyzing water, sediment and shellfish tissue samples to determine oil exposure. If these samples test positive, the trustees will initiate further damage assessment studies.

Approximately 450 birds have been killed by the oil spill. The affected birds include loons, scoters, mergansers, oyster catchers, terns (including roseate terns), eiders, and piping plovers. The two species of primary concern to the trustees because of their protected status are the roseate tern and the piping plover. Collection efforts for dead and oiled birds are still underway.

Trustees are also exploring potential impacts to the Northeastern beach tiger beetle (a Federally listed threatened species), the American burying beetle (a Federally listed endangered species), and the Diamondback terrapin (a State listed threatened species).

Shellfishing was closed by the State of Massachusetts soon after the spill (recently 50% of the shellfishing acres were re-opened). The closure demonstrates an injury to recreational shellfishing. The trustees are also looking at impacts to beach use, boating, and other recreational activities.

## Next Steps

The trustees will develop a draft natural resource damage assessment and restoration plan when they have collected sufficient information regarding potentially impacted resources. This plan will describe the potential resource injuries and service losses and the types of restoration projects to address these injuries and losses. After a public review and comment period, the trustees will select appropriate restoration projects to be funded and implemented by the responsible party, or implemented by the trustees.

*Workers clean up Buzzards Bay shoreline impacted by the oil spill.*

## The Public's Role

Trustees have begun meeting and will continue to meet with citizens, community and environmental groups, and local and regional officials to explain NRDA and identify restoration projects that both address the injury and fit the communities. The public will also have an opportunity to review and comment on the draft damage assessment and restoration plan.

**Trustee agencies act on behalf of the public to restore coastal and marine resources injured by oil spills and hazardous substance releases.** To learn more, please contact—

Frank Csulak or Lisa Pelstring
NOAA
Frank.Csulak@noaa.gov 732.872.3005
Lisa.Pelstring@noaa.gov 301.713.3038 x195

Dale Young
MA Executive Office of Environmental Affairs
617.626.1134
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Veronica Varela
U.S. FWS
603.223.2541
Veronica_Varela@fws.gov

Printed on recycled paper

May 2003
www.darp.noaa.gov

**Exhibit I**

carnival. Witnesses told police that a group

VIOLENCE, Page B8

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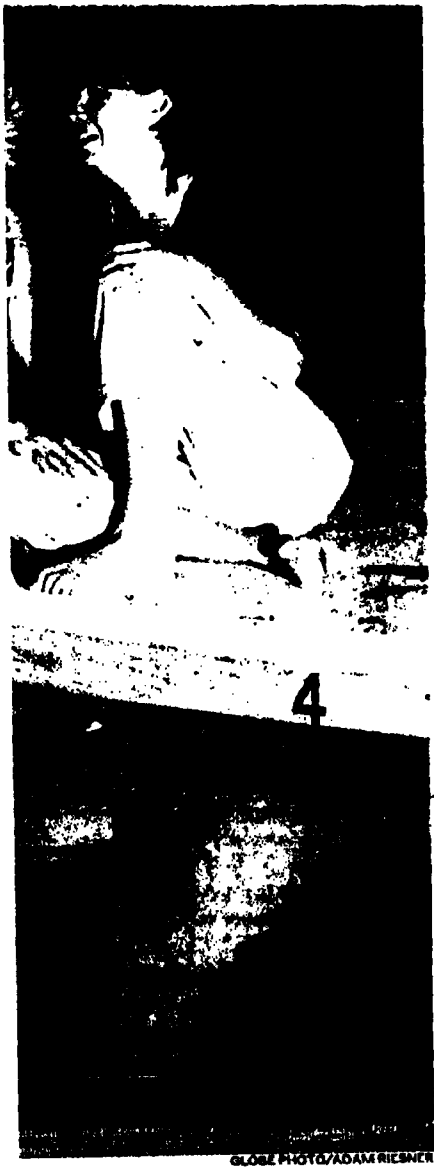


GLOBE PHOTO/ADAM RIESNER

of Kansas City, Mo., at Black Bear Inn civil union ceremony is today.

# Close ties complicate probe of oil spill

By Beth Daley
and Stephanie Ebbert
GLOBE STAFF

The tugboat crew responsible for April's oil spill in Buzzards Bay was not tested for alcohol use until at least 18 hours after its barge hit an underwater obstacle — a delay the Coast Guard has not disclosed as it manages an accident investigation and cleanup of the spill.

While attorneys for the tugboat's captain and mate say their clients had not been drinking, and there has been no evidence to suggest otherwise, the time lapse means the test was administered far too late to reliably detect alcohol, medical experts say. And the Coast Guard's silence about it adds to mounting scrutiny over a federal law that encourages a partnership between the companies that cause oil spills and the agency that investigates them.

Two boat drivers who shuttled in members of the crew for their drug tests said they did not make the trips until at least 18 hours after the incident. A source close to the investigation confirms the timeline.

The Coast Guard is responsible for overseeing the estimated 4,000 oil spills that occur each year in US waters, the vast majority of them minor. But federal law gives control over the actual cleanup to the companies that caused the spills — and pay for the cleanup. In many cases, the company provides much of the evidence that can later be used against it, such as estimating how big the spill was and arranging drug and alcohol testing of crew members.

"We entrust the responsible party with [illegible] fact, they should be treated as only one thing — a responsible party. Go over in the

SPILL, Page B8

# ns of bad feeling

# Close ties complicate probe of April oil spill

▶ SPILL
Continued from Page B1

corner and take your punishment. We'll send you the bill," said state Senator Mark C. Montigny, a New Bedford Democrat who represents the area affected by the spill.

In the April 27 spill, the crew's employer, Bouchard Transportation, arranged the alcohol tests. Last week, a company spokeswoman blamed the long delay on a testing contractor unwilling to test crew members while they were on the barge in the hours after the spill. Bouchard also provided the initial estimate of the spill's size: 14,700 gallons. Bouchard later said the spill was seven times larger and, more recently, revised the estimate again, to just under three times the initial estimate.

The close relationship between Coast Guard and shippers is, in part, the result of reforms enacted in the wake of the Exxon Valdez spill in Alaska. The Oil Pollution Act of 1990, passed in the aftermath of the $2 billion spill, ensures the responsibility of oil spill cleanups is placed on the polluter — protecting the government and taxpayers from shelling out tens of millions of dollars.

"[The] Coast Guard [wants] to rely on the responsible party," said Bill Gordon, an associate professor who teaches environmental law at the University of Rhode Island. If not, he says, the taxpayer could be forced to pay cleanup costs that in Buzzards Bay already have exceeded $34 million, a figure provided by the Coast Guard and Bouchard.

But while the cleanup may go well — and the Coast Guard has been lauded for its oversight in Buzzards Bay by environmentalists and local officials — critics say the cooperative spirit flies in the face of tough enforcement and a sound investigation. Now, with a criminal investigation by the US attorney's office, the Environmental Protection Agency's criminal investigations unit, and the US Fish and Wildlife Service ongoing, it may be difficult to independently prove exactly what the spill size was or if the crew was under the influence, because the company being held responsible provided that information.

Meanwhile, critics in New England and elsewhere are worried over the prevalence of retired Coast Guard employees that go on to work for the marine industry they regulated.

Bouchard has hired as a consultant the retired Coast Guard assistant commandant for marine safety and environmental protection, Rear Admiral Robert C. North declined to discuss his relationship with Bouchard, but said he was not present at the Buzzards Bay spill.

"The Coast Guard has an institutional culture of accommodating industry more than serving the public interest," says Rick Steiner, professor and conservation specialist with the University of Alaska Marine Advisory program that worked on the Valdez spill. A federally ordered citizen oversight board was created in the wake of the disaster — in part to act as a watchdog over the relationship between the Coast Guard and the shipping industry, Steiner said.

Congress passed the Oil Pollution Act in part to reform a haphazard cleanup process in which the responsible party paid the bills and government agencies often fought over control. The act solidified the responsible party's obligation to pay for the spill and set up a command system with the Coast Guard at the helm. However, that leaves the Coast Guard and oil companies essentially acting as partners, issuing joint news releases and sometimes relying on each other for information.

"There is an element of the honor system that goes on, and obviously, when you deal with disasters like this, that system gets stretched," said John Torgan of Save The Bay Rhode Island. Narragansetts Bay was hit hard by a 1996 oil spill.

Torgan and other critics say that honor system may prove costly in the Bouchard spill, which contaminated dozens of miles of Buzzards Bay coastline, killing hundreds of birds. The barge appears to have been out of the designated shipping lane, and it possibly hit rocks at the entrance to Buzzards Bay.

In the days following the accident, Bouchard was the single source of information about the size of the spill. The company hired an independent consultant to calibrate how much oil had escaped the ruptured tank and used the information to estimate the spill at 14,700 gallons. The Coast Guard did not hire its own consultant to verify the oil remaining in the tank. So when Bouchard upped the estimate to 98,000, and recently lowered it to closer to 39,000, the Coast Guard had limited information of its own to counter the changing estimates.

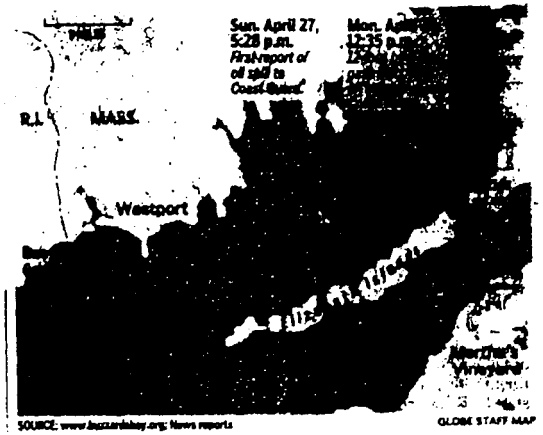
> 'We entrust the responsible party with far too much decision-making . . .'
>
> MARK C. MONTIGNY
> *State senator*

The shipping company also is responsible for ensuring the crew involved in an accident undergoes timely drug and alcohol testing. The Coast Guard is advocating new rules that would call for alcohol tests within two hours.

Company spokeswoman Suzanne Tavani said the crew was tested as soon as possible; the first priority was stabilizing the barge, she said. Afterward, the company's drug-testing contractor refused to go on the barge, "citing the extremely late hour," Tavani said.

GLOBE STAFF PHOTO/LANE TURNER

Nearly two months after the oil spill in Buzzards Bay, workers steam-clean rocks along the shoreline in the backyards of homes in Fairhaven.




SOURCE: www.buzzardsbay.org; News reports GLOBE STAFF MAP

But the delay made the tests suspect as a measure of alcohol consumption at the time of the accident, say medical professionals, though drugs might still be detectable.

"If the urine drug screening was done 16-24 hours after the event, it would be unlikely alcohol would be detected. However, other recreational drugs could have been," said Dr. Barbarajean Magnani, chief of the department of laboratory medicine at Boston Medical Center. And if blood testing was conducted, she said, the time frame would be even shorter to test for alcohol. The Globe could not determine whether blood or urine was tested in this case.

Nonetheless, the Coast Guard announced May 2 the crew members had passed the test. The announcement was made in a joint press release with representatives from Bouchard.

Attorneys for both the tugboat captain, Milan LeDuc, and mate Franklin Hill, denied the use of any substances before the accident. LeDuc himself asserted: "I don't drink. I don't hang around people that do."

Peter Ball, Hill's lawyer, said that Hill "states categorically that he took no alcohol or drugs between the beginning of the trip on April 24 and the time he was relieved of duty on April 29."

Coast Guard Captain Mary Landry, the federal on-scene coordinator for the spill cleanup, declined to comment on why the Coast Guard didn't mention the delay in testing when it announced the tests were negative. She said all information would be part of the Coast Guard investigation.

The law requires the responsible party to conduct the tests, and calls for a $5,000 penalty for each violation and for each day it fails to comply. But the time frame for testing is not specific in the law, and the vague language has resulted in sometimes lengthy delays in alcohol testing, weakening federal officials' ability to prosecute for late testing.

The loophole has attracted federal attention before. In 1996, when a Liberian tanker crashed into a bridge in Portland, Maine, the captain was tested for drugs, but not alcohol, making a definitive ruling impossible, according to a report by the National Transportation and Safety Board. Soon after, the NTSB recommended tightening the standards, and in 1998, Congress told the Coast Guard to create procedures that would ensure alcohol testing was done within two hours.

Now, five years later, those rules are still not in place. A Coast Guard official in Washington said they would not likely be enacted until late 2004.

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